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High School

Bulletin No. 1

Botany

ISSUED BY THE
DEPARTMENT OF PUBLIC INSTRUCTION

R. B. BRYAN,
Superintendent of Public Instruction.

OLYMPIA, WASH.:
C. W. GORHAM, PUBLIC PRINTER.
1907.



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INTRODUCTION.

The law of this state provides that the State Superintendent and the State Board of Education shall prepare courses of study for the schools of the state. Such courses of study were prepared at the meeting of the State Board of Education, held at Olympia in April, 1905. The law contemplates a uniform course of study for common schools and for high schools. As long as the text books used in the state were the same for all districts, the course of study in both common and high schools was really only an allotment of work, an assignment of a certain number of pages to be covered in a given time. Diversity of text books, in view of the requirement of a uniform course of study, materially changed the situation. The need of a unifying influence was felt at once. To meet this need a Manual for the Elementary Schools was issued in 1905. It has long been evident that a manual for High Schools was also needed. Any one at all familiar with educational conditions in Washington knows full well that there is greater variation in the quantity, quality and methods of work done in the high schools than in the common schools. So far there has been practically no supervision of high schools in this state. There has been some inspection, but very little supervision, and even this limited inspection has been confined to four-year high schools.

There are two methods possible in the preparation of a high school manual. First, competent instructors in various lines of high school work can be secured to prepare material and suggestions in their special lines, and the entire series of papers issued as a high school manual. Second, a series of conferences of high school instructors can be arranged, one conference for each line of work; at these conferences, there can be a thorough discussion of questions pertaining to a particular branch, and the conclusions of the conference published as a bulletin by the state department. After these bul-

letins have been used for a year or two, they can be revised and become part of a High School Manual. The Superintendent believes that the latter plan is preferable. A High School Manual prepared in this way would represent the consensus of opinion of the leading high school instructors of the state. It would be a growth, an evolution.

The first high school conference was held at Pullman on November 30th and December 1st, 1906. The subjects of botany, zoology and physics were discussed. At a result of this conference Bulletin No. 1 on Botany is issued. The preparation of the material for this Bulletin was delegated by the conference to Professor R. Kent Beattie, of the State College. He has worked out in detail the general conclusions of the conference. Both the arrangement and suggestions are Prof. Beattie's. This department wishes to acknowledge its full obligation to Mr. Beattie for the time and effort required for the preparation of this Bulletin.

How satisfactory were the conclusions of this conference and how well Prof. Beattie has succeeded in planning the work in botany are questions that time and trial will determine. It is hoped that this Bulletin will prove helpful in unifying and harmonizing the high school work of the state.

R. B. BRYAN,
Superintendent of Public Instruction.

THE CONTENT OF A HIGH SCHOOL COURSE IN BOTANY.

A High School Course in Botany should consist of a full year's work of at least five periods per week, about one-half the time being devoted to laboratory and field work, the other half to recitation work.

In this state there are some schools in which the scientific equipment and the teaching force are small. In such schools, it is not possible to devote more than half a year to the subject. Such schools should come up to the full year's basis as soon as possible. Meanwhile the effort should be to teach only that which can be well taught.

In the course outlined in the following pages, suggestions are made for both classes of schools. For a full year's work, Part I (A General Survey of the Lower Forms) and Part III (The Structure and Life Activities of the Seed Plants) are suggested; for half a year's work, Part II (A Speaking Acquaintance with the Lower Forms) and Part III.

There are several different phases of botanical work which have figured more or less prominently in High School Botanical Courses.

1. Morphology of the Seed Plants.
2. Physiology of the Seed Plants.
3. Morphology and Physiology of the Lower Forms.
4. Systematic Botany (chiefly confined to Seed Plants).
5. Ecology.
6. Histology.

The plant is a living organism. It has a work to do in the world, and it is provided with machinery for doing this work. It is an organism which has problems to solve, and in diverse ways it has solved them. To give the pupil a conception of the plant's labors and problems, this is the aim of modern Botany.

The content of an elementary botanical course must be determined upon the above expressed basis. That botanical material must be selected which is of the most worth in presenting to the pupil an elementary fundamental conception of the plant's life and labors and the organs which it uses in accomplishing its results. Such a conclusion clearly shows the place of morphology (the science of structure), physiology (the science of function), and ecology (the relation of the plant to its environment) in the elementary botanical course.

Systematic Botany is a much used and a much abused part of the subject. In so far as it consists in the committing of an extensive and, to the pupil, almost meaningless nomenclature and terminology, and the formation of a postage stamp collection of plant remains,

it is worse than useless. But when it means contact with the living world around us, a keen insight into structural variations and similarities, an accurate and concise account of the observed facts, and a close intimacy and familiarity with the plants of one's neighborhood, it is of great value. Rightly used, it acts as a splendid counter-irritant to the idea that plants grow in bottles of alcohol on the top shelves of the laboratory storage closet.

Histology, or in other words, minute anatomy, should be used very sparingly, if at all, in an elementary botanical course. There are many beautiful and interesting plant problems mixed up in histological material, but they are far too complicated and require too skillful a technique for the average high school pupil. There is no doubt but that in themselves they are of great botanical worth, but it is also true that following this delightful path will lead a pupil away from other things which are more valuable in an elementary course. Only so much histology as is absolutely essential is included in the suggested outline.

Plant students have long outgrown the conception that seed plants alone should constitute the elementary course. The false idea that they were simple and the lower forms complex has been overturned by the greatly increased knowledge of their complicated processes and complex structures. Today there is little opposition to the thesis that the pupil should be given a comprehensive grasp of the Vegetable Kingdom, that one-sided and distorted glimpses should be avoided. For this reason the Lower Forms have been given their merited place in the appended suggestions.

The great fundamental problem that faces every plant is the more perfect adaptation of its structures and processes to the environment which surrounds it. Nothing can make clear to the pupil the solution of this problem but a comprehensive view of the development of the Vegetable Kingdom. He must know the simple cells which have no division of labor. He must see the responses which plants make to the demands of their environment. He must observe the specialization of tissues and organs. All other concepts, important though they be, are secondary to the one great bird's-eye view of the plant kingdom. The natural order has therefore been followed in the arrangement of topics. Those plants in which life processes and their corresponding structures are simple precede; the more complicated follow; and the whole reaches a climax in the complicated processes and organs of the most specialized of all plants, the seed plant. Because of their great complexity of structure, function and adaptation, because of their dominance in the world today, one half of the year's work is put on this group. Some teachers would allow more time for the lower forms.

There are those who would contend that the order of presentation given below should be reversed, that seed plants should be treated before the lower forms. The chief argument advanced is that "we should

proceed from the known to the unknown." The fallacy of this argument lies in two points: First, the assumption that the seed plants are the "known" and the lower forms the "unknown." As far as life processes and real structures are concerned, the seed plants are as little known as are the lower forms. A general knowledge that they exist and a gross conception of rather unimportant external structure is all that can be counted upon in the average high school pupil. The second fallacy lies in the misconception of the real meaning of the pedagogical law. Correctly stated, it is: "We should pass from the known to the **related** unknown." This puts a new aspect upon the entire problem. It throws powerful objections in the way of the above mentioned plan, an exemplification of which may be found in a recent textbook, where the distribution of the subject-matter is as follows:

Pages 1 to 19—General morphology and physiology of seed plants.

Page 20—The plant cell.

Pages 21 to 177—General morphology and physiology of seed plants.

Pages 178 to 185—The plant cell.

Pages 186 to 234—General morphology and physiology of seed plants.

Pages 235 to 305—A survey of the lower forms.

Pages 306 to 395—Plant geography and ecology (chiefly of seed plants).

Such an outline can with difficulty give the pupil a comprehensive grasp of the fundamental problems of the plant kingdom.

Another argument presented on this question is: "That the study of the lower forms requires the use of the compound microscope, an instrument too difficult for the average tenth grade pupil." This is best answered by the statement of three facts: (1) In the state of Nebraska for a number of years practically the only botany accepted from accredited schools has included a general survey of the Vegetable Kingdom, accompanied by the use, by the pupil, of the compound microscope. (The same thing is true of several other states). (2) The writer has handled a **ninth grade** high school class of 22 pupils for a full year with an equipment of 10 compound microscopes, obtaining good results, and leaving the instruments at the end of the year in good condition. (3) Every teacher present at the conference, from his practical experience, agreed that the use of the microscope was a perfectly feasible thing for high school pupils in the state of Washington.

The chief difficulty in the use of the microscope lies in two things: (1) Some teachers purchase too complicated instruments. A condenser has no business on an elementary pupil's microscope. (2) Some teachers fail to carefully instruct the pupils in the care and use of the instrument, seeming to expect them to know this from intuition. The difficulties lie in **the teacher**—not in the microscope.

The testimony of the teachers at the conference who have tried both methods of presentation, is that taking the lower forms first

awakens more interest and secures a more comprehensive grasp of plants than putting the initial work on the more complicated plants.

The end and aim of all human knowledge is generalization. The power to generalize is gained by generalizing. "We learn to do by the doing," a Greek philosopher has said. The material of an elementary botanical course should be so arranged and so presented that the pupil will secure series of related data such as will lead him to generalization. Facts should be presented before derived conclusions; individual phenomena before general laws. But it is the power to generalize and not the catalog of data which we wish the pupil to retain. This principle must be remembered in the preparation of the plan of a course.

In the presentation of a bird's-eye view of the Vegetable Kingdom by means of a series of types, great care must be taken by the teacher that the pupil learns to think of the type studied as a representative of a group and not as an individual peculiar in itself. For this reason, the outline below suggests that the pupil should be given a conception of each group, first through its types and later by a glimpse of specimens and pictures of other members and by textbook or other descriptions of related plants.

The economic side of the subject is of vital importance to the pupil as he passes on into the world of life. Some attention should be called to this side of the plant's existence. Reference material is very abundant upon this subject. The bulletins of the various Experiment Stations and of the United States Department of Agriculture form an almost inexhaustible mine of information. A set of these should be accumulated in every high school. Suggestions along this line will follow later under the head of "Literature."

PROBLEMS IN PLANT LIFE.

(A suggestion toward a unified plan for elementary botany in the High Schools of the State of Washington.)

PART I. A GENERAL SURVEY OF THE LOWER FORMS.

(This requires the constant use of the compound microscope by the pupil.)

I. THE CELL, THE UNIT OF PLANT STRUCTURE.

A general conception of the plant cell.

1. The cell in *Spirogyra*.

An example of a relatively simple, easily studied cell, in an undifferentiated filament.

Its structure; stain with iodine; osmotic forces, diffusion and plasmolysis in the cell; treat with glycerine, alcohol, etc. (Teach the pupil to use the microscope, to make temporary mounts, and to introduce reagents under the cover glass here.)

2. The cell in the stamen hair of *Tradescantia* (Wandering Jew).

Mounted carefully without injury to demonstrate protoplasmic movement within the cell. Internodal cells of *Chara* or *Nitella* or the hairs on squash, pumpkin or tomato may be used instead.

3. The cell in *Protococcus*.

A simple cell which lives alone or in a loose colony.

4. The cell in a moss leaf.

A little-differentiated cell in a many-celled individual.

5. The cell in elder pith.

A specialized cell in which the protoplasm has dried up. (Teach the pupils to make sections here.)

6. The cell in a young apple twig.

Variously differentiated cells in a many-celled individual. Relative shape and size, importance of protoplasm and walls in the cells. Linden or a twig of any other tree with soft wood will do.

7. The cell in a peach stone.

A highly specialized plant cell.

II. THE BLUE-GREEN ALGAE AND THE BACTERIA.

A simple plant body and a vegetative reproduction.

Representatives:

Nostoc—Life history, plant body, methods of reproduction.

Oscillaria—Movements, life history, etc.

A glimpse at other forms of blue green algae from textbooks and pictures.

The Bacteria from textbooks and pictures and demonstrated by mother of vinegar and other cultures.

Their structure and reproduction.

Economic importance.

Beneficial bacteria—decay—nitrogen fixation.

Injurious bacteria—contagious diseases—vaccination—disinfection—sterilization.

III. THE GREEN ALGAE.

The improvement of the plant body.

The origin and differentiation of sex organs.

Representatives:

Protococcus—Single cell or loose colony.

Spirogyra—Filamentous form with typical conjugation.

Vaucheria—Coenocytic plant body and differentiated coenogametes.

Oedogonium—Differentiated gametes and the beginning of an interpolated spore generation.

A glimpse at other Green Algae (Diatoms, desmids, Ulva, etc.) from specimens, textbooks, and pictures.

IV. THE LOWER FUNGI.

The plant body affected by parasitism.

The differentiation of sex organs.

Representatives:

Mucor—Asexual reproduction, conjugation. Compare with **Spirogyra**.

Cystopus—Coenocytic plant body, differentiated coenogametes. Compare with **Vaucheria**.

A glimpse at other lower fungi from textbooks and pictures.

Plant diseases due to lower fungi, potato blight, etc.

V. THE BROWN SEAWEEDS.

Types of marine vegetation.

The increase in massiveness and the color of the plant body.

The differentiation of sex organs.

Representatives:

Laminaria (the Kelp)—Plant body, gonidangia, paraphyses.

Fucus (the Rockweed)—Differentiation of gametes, conceptacles, the fertilization process.

A glimpse at other brown seaweeds from specimens, textbooks, and pictures. The environmental conditions which surround them; the waves and the tide, etc.

VI. THE HIGHER GREEN ALGAE AND THE RED ALGAE.

The stimulus of fertilization extends beyond the sex cells; the formation of an accessory protective covering (the sporocarp).

Representatives:

Coleochaete—Plant body, sporocarp, the incipient sporeplant.

Chara—Plant body, differentiation of parts, reproduction, antherid, oogone, the early developed sporocarp, the results of the germination of the fertilized egg cell.

A glimpse at the Red Seaweeds from specimens, textbooks, and pictures, their color, texture, and distribution in the ocean.

VII. THE HIGHER FUNGI.

The effects of parasitism; stages of degeneration; loss of sex organs; reduction of the plant body.

Representatives:

Microsphaera (the powdery mildew)—The mycelium, the summer spores, the closed perithecium, appendages, asci, ascospores. Characters of related genera.

Plowrightia (the black knot)—Stroma, sunken perithecium with ostiole, asci, ascospores, gonidia.

Physcia (the lichen)—Symbiosis, the algal host, structure of combined plant body, asci on cup-like disks.

Puccinia (the wheat rust)—Stages, life on different hosts, mycelium on each, cluster cups, ureodospores, teleutospores, sporidia.

Agaricus (the toadstool)—Mycelium, fruiting body, shape, structure, basidia.

A glimpse at the higher fungi (cup fungi, smuts, toadstools, yeasts, imperfect fungi, etc.) from specimens, textbooks and pictures.

Plant diseases due to higher fungi (rusts, smuts, mildews, anthracnoses, etc.), losses, methods of combatting.

The yeast plant and its commercial uses.

Mushrooms and their use for food; poisonous toadstools.

VIII. THE LIVERWORTS.

The highly developed gamete plant.

The growing prominence of the spore plant.

Representatives:

Marchantia (the liverwort)—Structure of the thallus, gamete bearing branches, breathing pores, air chambers, antherids, archegones; the spore plant, vegetative tissue, spores; how the spores get out.

Porella (the leafy liverwort)—“Leaves,” “stems,” reproduction, the spore plant.

A glimpse at the Liverworts from textbooks, pictures and specimens.

IX. THE MOSSES.

The highest development of the gamete plant.

The well developed spore capsule.

Representatives:

Sphagnum (the bog moss)—Plant body, stem, leaves; spore plant, spore case, spores. Its environment, bog conditions.

Mnium (the true moss)—Plant body, protonema; spore plant, capsule, spores. Gemmae in *Aulacomnium*.

A glimpse at other mosses from textbooks, pictures and specimens.

X. THE FERNS AND THEIR ALLIES.

The attainment of independence by the spore-plant.

The consequent development of the spore-plant vegetatively; the development of leaves, stems and roots, and the differentiation of their life processes.

The reduction of the gamete-plant and its increasing dependence upon the spore plant.

Representatives:

Polypodium—The gamete plant, structure, sex organs, length of life; the sporeplant, roots, stems, leaves, form, structure, reproduction, fruit dots, spore cases, spores.

Comparative study of several ferns as to distribution and protection of fruit dots, form of leaves, etc., e. g. *Pteris*, *Woodsia*, *Adiantum*, *Dryopteris*, etc.

Marsilia (the water fern)—Aquatic life, sporocarps, differentiation of spores, reduction of gamete plant.

Equisetum—Jointed hollow stem, reduced leaves, spore cases in cones, similar spores.

Lycopodium (the ground pine)—Leaves, cones, similar spores.

Selaginella (the little club moss)—Differentiation of spores, the reduction of the gamete plant.

Isoetes (the quillwort)—Appearance, habitat, form of leaves, two kinds of spores, reduction of gamete plant.

XI. GENERAL TOPICS AND LINES OF WORK ON THE LOWER FORMS.

1. The development of the plant body of the gamete plant, its climax in the mosses and its subsequent reduction.
2. The development of the spore plant, and the attainment of its independence.
3. The development of sex organs and their differentiation.
4. Parasitism, saprophytism, and symbiosis, and their effect upon the plant.
5. Adaptations to fresh water, marine, and terrestrial life in the plant body and reproductive organs among lower forms.
6. The collection and preservation of lower forms.
7. The collection by the pupil of at least 25 lower forms and the assignment by him of each to its appropriate group.

PART II. A SPEAKING ACQUAINTANCE WITH THE LOWER FORMS.

(This part does not require the use of the compound microscope, altho it should be used where it is available.)

XII. THE ALGAE.

Habitat, appearance, general structure, and general methods of reproduction.

Representative:

Spirogyra—Gross appearance and structure, cells and protoplasm, chlorophyll, how new plants are formed.

A glimpse at the more prominent kinds of algae from specimens, textbooks and pictures.

The Blue Green Algae.

The Green Algae.

The Brown Seaweeds.

The Red Seaweeds.

XIII. THE FUNGI.

Habitat, appearance, means of obtaining food, general structure, general methods of reproduction.

Representative:

Microspheera (the powdery mildew)—Mycelium, summer spores, winter spores, parasitism on seed plants.

A glimpse at some of the more prominent kinds of fungi from specimens, textbooks, and pictures.

The Black Moulds, the Bacteria, the Yeasts, the Water Moulds, the Powdery Mildews, the Lichens, the Rusts, the Smuts, the Puffballs, the Toadstools.

The economic importance of the Fungi. Beneficial Fungi and Bacteria, plant and animal diseases.

XIV. THE LIVERWORTS AND MOSSES.

Habitat, thallus, asexual and sexual reproduction; the interpolated spore generation.

Representative:

Marchantia (the Liverwort)—Thallus, cupules and gemmae, antherids and archegones; the spore plant.

The more prominent kinds of Liverworts from specimens, textbooks, and pictures.

The mosses from specimens, textbooks, and pictures.

XV. THE FERNS AND THEIR ALLIES.

The independence of the spore plant.

Its consequent vegetative development and the reduction of the gamete plant.

Representative:

Polypodium—The prothallium; the sporeplant, the roots, stems, leaves, fruit dots, spore cases and spores.

Some of the more prominent ferns and fern allies from specimens, textbooks and pictures.

Division of labor in reproduction and the development of two kinds of spores.

XVI. THE COLLECTION AND PRESERVATION OF LOWER FORMS.

Methods of collecting and mounting algae.

Methods of collecting and packeting fungi.

Methods of drying and preserving ferns.

The preparation by each pupil of a field collection of 25 lower forms and the assignment of each by him to its proper group.

PART III. THE STRUCTURE AND LIFE ACTIVITIES OF THE SEED PLANTS.

XVII. THE EARLY STAGES IN THE LIFE OF A SEED PLANT.

The resting condition of the young plant and its awakening into activity.

1. The structure of the seed in which the young plant is formed.
2. The structure of the embryo plant.
3. The food supply which the parent plant has provided.

Kinds.

Where located.

Economic importance.

4. How the little plant gets out of the seed and breaks thru the soil.
5. The steps in the development of the seedling.

Representative seeds:

Lima Bean—Well developed embryo, no endosperm, cotyledons come above ground.

Horse Bean—Well developed embryo, no endosperm, cotyledons remain underground.

Castor Oil Bean—Embryo, endosperm, two cotyledons.

Indian Corn—Embryo, endosperm, single cotyledon.

Pine Nut—Embryo, endosperm, several cotyledons.

Suggested problems:

Testing seeds for starch.

Testing seeds for proteids.

Testing seeds for oils.

How do seeds break thru the soil.

- How does the squash seedling get rid of its seed coats?
How many cotyledons are there in the bean? Is the number constant? Examine at least 100 beans.
How many cotyledons are there in the pine seed?
What is the position of the first pair of leaves in the epicotyl of the bean?
What is the color of the little plant in the seed of the broad-leaved maple and the fir?
How do embryos of different seeds vary in size and structure?
Is a certain lot of seed pure and will it germinate? Get some commercial clover and other seed and test it.

XVIII. LIFE PROCESSES OF SEEDS AND SEEDLINGS.

1. Conditions necessary for germination:
Moisture, heat, oxygen, and maturity.
2. Growth processes of the embryo:
Increase in size.
Differentiation—root and shoot.
Absorption of food.
Establishment of independence.
Manufacture of food begun.
3. Stimuli affecting the seedling:
Light-positions and retardation of growth.
Gravitation—Position of parts.
4. Retention of vitality by seeds.
Suggested problems:
Do seeds need soil to germinate?
Do seeds need light to germinate?
Do seeds need water to germinate?
Will seeds germinate without a supply of air?
What is the effect of temperature on germination?
Will unripe seeds germinate?
Does it make any difference how deep seeds are planted?
Does it make any difference in germination which side of a seed is placed up in planting?
Does planting a seed upside down affect the point at which the hypocotyl and epicotyl leave the seed?
How much water do bean seeds absorb when germinating?
What response does the seedling make to gravity?
Is carbonic acid gas given off by germinating seeds?
Has light any effect upon seedling growth?
How rapidly do seedlings respond by change of position to strong light?
Can the presence of a green coloring matter in plants be demonstrated?
Is the stored up starch converted to sugar when a seed germinates?
Do seeds exert force when they swell?

Where is the point of most rapid elongation in a hypocotyl?
How fast does a hypocotyl grow?
What efforts will a seedling make to reform lost parts of the epicotyl?
What seeds will germinate under water?
How long may a seed stay in boiling water and not be killed?
What temperature will wheat stand for fifteen minutes and not be injured?

XIX. THE ROOT SYSTEM.

1. How the plant obtains water and mineral salts.
 - Need and origin of the root system.
 - Structure of roots—bean, parsnip, dandelion.
 - Extension of absorbing surface.
 - Root branches.
 - Zone of root hairs—wheat grown in moist cloth or saw-dust.
 - Diffusion and osmosis in the root system.
 - Root pressure.
2. The soil a source of water and mineral salts.
 - Structure of the soil.
 - Behavior of roots in the soil.
 - Available and unavailable mineral salts.
 - Changes occurring in the soil.
 - Humus and its necessity.
 - Nitrogen-fixation.
 - Water and its movement in the soil.
 - Cultivation.
 - Studies of sand, clay, loam, and muck.
 - Experiments on the movement of water in each.
3. Other sources of water and mineral salts.
 - Aerial roots—Ivy.
 - Parasitic roots—Dodder.
4. How the plant anchors itself.
 - Distribution of roots.
 - Strengthening tissues in roots.
 - Brace roots.
 - Pull roots.
 - Study root systems of plants by washing away the soil.
 - Structure of roots of woody plants.
5. The storage of food and water in roots.
 - Location of food.
 - Use of food.
 - Economic importance of stored food.
 - Storage of water.
 - Turnip, carrot, parsnip, radish, etc.

XX. THE SHOOT AND THE ORIGIN OF NEW SHOOTS.

The organization and development of a food manufacturing system.

1. Differentiation into stem and leaf.
 - General function of stem.
 - General function of leaf.
 - The transfer of water and solutions.
 - Food manufacturing tissue.
 - Food and water storing tissue.
2. The origin of new shoots.
 - Growing points.
 - Winter buds—resting condition.
 - Protection for growing points—scaly and non-scaly buds.
 - Structure of buds.
 - Latent buds.
 - Adventitious buds.
3. Division of labor among shoots.
 - Long and short shoots—pine, tamarack.
 - Flowering and vegetative shoots. Crataegus.
4. Effect of stimuli on shoots.
 - Light positions—Tropaeolum.
 - Gravitation positions—Bean, corn, woody plants.
 - Contact—Sensitive plants, Mimosa, stamens of barberry.

Laboratory work on the growth of plants without winter buds.

The formation of branches.

Structure and methods of opening of winter buds of horsechestnut, lilac, walnut, willow, etc.

XXI. THE STEM AND ITS BRANCHES.

1. The structure of the stem.
 - Endogenous—Epidermis, pith, woody bundles. Corn, wheat.
 - Exogenous—Epidermis, cortex, woody bundles, pith, medullary rays, cambium, bark. Aristolochia, Linden, Clematis, Geranium—one-year-old stems.
2. The growth of the stem.
 - Two and three-year-old exogenous stems. Same as above.
3. The movement of solutions in the stem. Colored liquids in a Coleus stem.
4. The strengthening of the stem.
 - Herbaceous and woody stems.
 - Mechanical arrangement of the bundles.
 - Herbs, shrubs, and trees.
 - Lianas and vines—Grape vine, etc.
 - Hard and soft woods—Pine and oak.
5. Wood products and lumber.
6. Forests and their importance.
7. The size of trees.
 - Arctic and Alpine trees
 - The Big Trees of California.

XXII. THE FOLIAGE LEAF.

1. The manufacture of starch food.
The source of raw material.
The structure of the leaf.
The epidermis and breathing pores.
The woody bundles (ribs)—Venation.
The mesophyll.
2. The importance of Green Plants in the world's food supply.
3. Water Loss.
Amount and importance.
Means of prevention—Hairs, bloom, rolled leaves, etc.
Leaves of plants of moist and dry regions.
Dry land farming—The conservation of moisture.
4. Respiration and its significance.
5. The manufacture of proteids and fats.
6. The form and arrangement of leaves and their light relation.
Petiole, blade, stipules.
Rosettes, mosaics, etc.
7. The systematic value of leaf characters.

Teach these by having the pupil write descriptions of leaves in the manner in which descriptions are written in manuals. Do not use the Chinese fashion of writing descriptions in columns in the form used in the so-called "Plant Analyses." Teach the pupils to pick out the distinctive characters between leaves by having them make keys similar to those in manuals to distinguish a certain group of leaves before them. This work can be made a mere committing of terminology by a poor teacher or it can be made to furnish a keen insight into distinguishing characters by a good teacher.

XXIII. VEGETATIVE MODIFICATIONS OF ROOTS, STEMS, AND LEAVES.

1. Reduced forms for the protection of flowers and buds.
Bracts, scales, glumes, etc.
2. Modified forms for the protection of plants against animals.
Thorns, spines, and prickles (modified hairs).
3. Modified forms for storage.
Storage of water and food, cotyledons, fleshy stems, leaves, and roots.
4. Modified forms for the reduction of water loss.
Phylloclades, reduced stems, stems without leaves, etc.
5. Organs for climbing.
Tendrils, suckers, root tendrils, etc.
6. Carnivorous devices.
Traps, and pitfalls.
Devices with sticky substances.
Devices showing movement.

XXIV. ORGANS FOR VEGETATIVE PERPETUATION AND RE-PRODUCTION.

1. To perpetuate the plant over winter.
Rootstocks—Grasses, lilies, etc.
Bulbs—Onion, etc.
Corms—Fritillaria, Cyclamen.
Tubers—Potato, etc.
2. To multiply the numbers of individuals.
Cuttings—Willow, Geranium, etc.
Runners—Strawberry, *Potentilla anserina*, etc.
Bulbils—Onion.
Suckers, stolons, etc.
Grafting, budding—Scions, stocks, top-working, etc.
3. Economic importance.
Greenhouse and orchard propagation.
Modern varieties of fruits and vegetables.
4. Physiological identity of the individual in plants propagated vegetatively.

XXV. SPORE FORMATION IN THE GYMNOSPERMS.

1. The Gymnosperms—what they are.
2. Method of spore formation.
Location of spore cases.
Two kinds of spores—their division of labor.
Comparison with fern allies.
3. Development of gamete plants.
Pollination and fertilization.
4. The Seed and the young spore plant (the embryo).
5. A detailed study of the whole process in the Pine.
Compare the organs with those of fir, tamarack, cedar, etc.

XXVI. SPORE FORMATION IN THE ANGIOSPERMS—THE FLOWER.

1. The spore-bearing organs.
The stamen—the small spores.
The pistil—the large spores, the ovary, the receptive surface.
2. The growth of the gamete plants.
The pollen tube.
The female gamete plant (the embryo sac).
3. Pollination and fertilization.
4. The seed and the young spore plant.
5. The accessory flower organs.
The protective apparatus.
The “flag-apparatus.”
6. The number of flower parts.
7. The reduction and union of flower parts.

8. A detailed study of the above points in two plants such as a buttercup and some lily (probably *Erythronium*).
9. The systematic value of flower characters.

Teach this by having the pupil write careful descriptions of flowers and of whole plants in the manner used in manuals. Note the remarks in XXII. Make keys distinguishing plants by their flower characters.

XXVII. POLLINATION AND FERTILIZATION AND THEIR RESULTS.

1. How pollination is effected.
 - Wind.
 - Insects.
 - Close-pollination.
 - Flower-adaptations for pollination.
2. The distinctions between pollination and fertilization.
3. The heredity of the young plant. Hybrids, and the laws which govern them.
4. Variation and Mutation.
5. The economic application of this in the production of new plants.
 - Breeding wheats, cotton, cow pea, garden vegetables, etc.

XXVIII. THE FRUIT AND THE DISTRIBUTION OF SEEDS.

1. Kinds of fruits.
 - Fleshy, winged, plumed, pods, etc.
2. Development of fruits.
3. Distribution of fruits.
4. Economic importance of fruits and seeds.
5. Garden and farm seeds, their purity, vitality, and trueness to variety. The seed business, seed catalogs, etc.
6. Weeds, their methods of propagation, amount of injury, and methods of destruction.

XXIX. SOME OF THE PRINCIPAL FAMILIES OF FLOWERING PLANTS.

Available families selected because they illustrate the flowering plants well.

1. The chief characteristics which distinguish each.
2. The native plants which typify each.
3. The economic plants belonging to each.
 - Liliaceae**—*Erythronium*, *Fritillaria*, etc.
 - Gramineae**—*Bromus*, *Agropyron*, *Avena*, etc.
 - Iridaceae**—*Iris*, *Sisyrinchium*.
 - Ranunculaceae**—*Ranunculus*, *Clematis*, etc.
 - Cruciferae**—*Brassica*, *Sisymbrium*, etc.
 - Caryophyllaceae**—*Saponaria*, *Silene*.
 - Polemoniaceae**—*Phlox*, *Gilia*.

Scrophulariaceae—Pentstemon.

Rosaceae—Potentilla, Crataegus, Prunus.

Leguminosae—Vicia, Lupinus, Trifolium.

Umbelliferae—Heracleum, Lomatium, etc.

Compositae—Taraxacum, Balsamorhiza, etc.

If time is available other families may be studied.

XXX. PLANT SOCIETIES AND THE FACTORS WHICH CONTROL THEM.

1. Ecological Factors.

Water-content of soil.

Humidity of atmosphere.

Light.

Temperature.

Precipitation.

Wind.

Soil.

Physiography.

Surrounding living organisms.

2. Types of plant societies.

Their environment and adaptations.

Hydrophyte Societies.

Free swimming.

Pond weed.

Swamp.

Xerophyte Societies.

Rock.

Sand.

Plains.

Desert.

Forest.

Mesophyte Societies.

Carpets.

Meadows.

Thickets.

Forests.

Halophyte Societies.

Salt springs and streams.

Salt deserts.

Salt marshes.

The ocean and its vegetation.

3. Prominent Washington Plant Societies.

Alpine meadows.

Sage brush plains—*Artemisia tridentata*.

Red fir and cedar forests—*Pseudotsuga mucronata* and *Picea Sitchensis*.

Bunch grass prairies—*Agropyron spicatum*.

Yellow pine forests—*Pinus ponderosa*.

White pine forests—*Pinus monticola*.

Subalpine fir and Alaska cedar forests—*Abies lasiocarpa* and *Chamaecyparis nootkatensis*.

XXXI. SYSTEMS OF CLASSIFICATION AND THE IDENTIFICATION OF UNKNOWN PLANTS.

1. The relative importance of the groups used in classification.
Branch, class, order, family, genus, species.
2. Systems of nomenclature.
What the name of a plant is.
Who names plants and how names are given.
3. Classification based upon relationship.
4. What a manual is, and how to use it.
The use of keys and descriptions.
Determining the name of an unknown plant.
5. The data necessary for the preservation and future identification of a specimen.
6. Sufficient practice in the identification of plants to become familiar with the use of the keys and descriptions; to learn to examine plants critically; and to realize what are the essential points necessary for the determination of species of some of the more common families.

XXXII. SPECIAL FIELD PROBLEMS.

Each student should be assigned a special field problem of his own. This he is to solve by a careful study of the plants as they grow out of doors. The problem should be assigned early in the second half year, and the results should be submitted at the end of the year in the form of a thesis, accompanied by such lists, maps, and collections of plants as are necessary.

In each problem the home region and the spring period of the year are assumed as a part of the problem. Other regions or seasons could be selected if the teacher deems it wise.

The careful field study is the important part of the work rather than the preparation of a herbarium. The herbarium is only valuable as it helps to represent the solution of the problem. Miscellaneous plants should not be included. The requirement of visible evidence, however, acts as a stimulus to accuracy and prevents hasty and careless statements. The work should at all times be under the close oversight of the teacher, and frequent reports should be required.

When the thesis is handed in, the list of plants and collections of preserved material should be grouped and arranged in the order used in Piper's *Flora of Washington*.

The following are suggested as sample problems to be modified and extended to fit local conditions:

1. What plants of the region propagate by bulbs or corms?
2. What plants propagate by rhizomes?
3. What trees and shrubs occur in the region?
4. What plants are weeds in vegetable gardens?
5. What plants are roadside weeds?

6. What plants occur and how are they distributed on a certain assigned tract of land? Map the tract. By assigning tracts to various pupils, an interesting plant geographical survey of the neighborhood can be made.
7. What plants of the region have wind-pollinated flowers?
8. What plants are visited by honey bees?
9. What plants are provided with thorns, spines, and prickles on the leaves or stems?
10. What plants do horses eat in a pasture or on a range and what do they avoid? Why?
11. What plants occur in a certain pond or on its banks?
12. In the Palouse country, what plants are confined to north hill-sides?
13. What plants of the region are attacked by powdery mildews?
14. What plants are attacked by rusts?
15. What plants are worthy of cultivation and for what part should each be cultivated?
16. What plants present the upper and lower surfaces of their leaves about equally to the strong sunlight?
17. What plants have scaly buds?

THE HIGH SCHOOL BOTANICAL MUSEUM.

Attention has been called previously to the danger that pupils will consider a plant as a thing by itself and not as a representative of the group to which it belongs. The study of types alone is not likely to give to the pupil a well balanced idea of the Vegetable Kingdom. He is likely to be narrowed down to a certain few detailed facts, rather than to get a broad conception of the fundamentals of plant life. The type study must be supplemented by glimpses of other related plants which will broaden the pupil's conception and eliminate the unimportant details which he may have absorbed and magnified in his mind.

The high school botanical museum is one of the best means of accomplishing this result. In it there should be placed everything which can contribute to the broadening and clarifying of the pupil's conceptions of plants. There is no end to the valuable material which can be included in such a collection, but a few suggestions may stimulate such work in Washington High Schools.

THE HERBARIUM.

Every high school should have a properly cared for general collection of the plants of the region in which it is located. The plants should be carefully collected and preserved, neatly mounted on standard paper, and properly labeled. The aim of such a collection should be to have a standard series of plants of the region for general illustration and reference. Especially in this state, where so many new teachers from other regions are constantly taking up the work.

is it necessary to have a helpful reference collection. Such plants should be carefully labeled with the **place** and **exact date** of collection, and the name of the collector.

OTHER MATERIAL.

Besides a collection of material illustrating the flora of the neighborhood, the museum should contain preserved material to illustrate the topics which are discussed in the High School Botany Course. Much of this material can be dried and preserved in the same way as the herbarium. In other cases it is necessary to preserve it in a 2 per cent. solution of formaldehyde or a 75 per cent. solution of alcohol.

Specimens of plant diseases, especially those attacking cultivated plants, properly labeled, make an instructive exhibit. A collection of the weeds of one's neighborhood so prepared as to show clearly the method of propagation is valuable. Specimens of various kinds of timber trees and the lumber which comes from them are useful. Series of food and medicinal plants will prove attractive.

As soon as possible these collections should be arranged in cases and put where they will be a continual attractive lesson to the pupil.

One of the most important points in the arrangement of such a collection is the proper labeling. The label should be neat and accurate and should state in full the points illustrated by the specimen. It should also, where possible, cite available interesting literature, which the pupil may consult for further enlightenment on the subject.

APPARATUS FOR THE HIGH SCHOOL BOTANICAL LABORATORY.

The amount of equipment necessary for a botanical laboratory depends upon the number of pupils, the amount of botany to be given and the available teaching force. If compound microscopes are not available, the high school should not undertake to give a full year of botany. More than half a year's time cannot be profitably used in such a high school upon the subject with the surrounding conditions and other equipment such as is found in the usual high school.

It is poor economy to save on the equipment of a laboratory in such a way as to necessitate the expenditure of a large amount of additional labor on the part of the teacher. The nervous energy of a good teacher is a far more valuable commodity for the high school than is money saved by failure to purchase apparatus.

If a year's work is given, it is economy to have as many microscopes as pupils. It is possible to do the work with less, but the best work cannot be done. With more than one pupil at a microscope it is difficult to prevent the dependence of pupils upon each other, which oftentimes eliminates entirely individuality of work. If, however, a high school must make a start in getting apparatus, it is not always possible to reach the ideal. The following suggested apparatus can be used to great advantage in the high school, and, indeed, is almost

indispensable for good work. It can be extended as the needs of the school increase.

5 compound microscopes, at \$30.....	\$150.00
3 gross slides, at 80 cents.....	2.40
3 oz. cover glasses, at 80 cents.....	2.40
10 forceps	3.00
10 scalpels	3.50
2 razors	2.00
10 pocket lenses	10.00
12 Economy fruit jars, half-gallons, for aquaria.....	1.75
12 Mason fruit jars, quarts, for preserving material.....	1.00
12 Mason fruit jars, pints.....	.75
25 5-oz. salt mouth bottles.....	1.00
100 shell vials, 50x12 mm.....	.70
24 tumblers	1.20
1000 grams glass tubing .....	.65
12 feet rubber tubing	1.20
1 pound formalin .....	.50
5 gallons ethyl alcohol, bought duty free, from distiller....	3.00
200 corks .....	.75
3 granite pans, for fungus cultures.....	1.00
10 dropping bottles (Bausch & Lomb 12730).....	.60
1 glass-cutter .....	.15
Eosin .....	.30
Iodin .....	.75
Glycerin .....	.25
<hr/>	
\$188.85	

TEXTBOOKS AND REFERENCE LITERATURE.

The following list contains only a small number of the many publications which would be of value in the High School Reference Library. Only a few of the most useful are cited. Each book in the list contains some material adapted to such a course as is outlined above. The most essential books are placed at the head of each list; the remainder are arranged alphabetically.

Under the head of Experiment Station and Government Publications, a few of the bulletins which would probably be available for high schools are listed. As is explained later, teachers can get lists of available bulletins.

TEXTBOOKS INTENDED FOR ELEMENTARY BOTANY.

Stevens, W. C. Introduction to Botany. D. C. Heath.....	\$1.25
Bergen, J. Y. Foundations of Botany. Ginn & Co.....	1.50
Andrews, E. F. Botany All the Year Round. Amer. Book Co...	1.00
Atkinson, G. F. Elementary Botany. Henry Holt.....	1.25
Bailey, L. H. Lessons with Plants. MacMillan.....	1.10
Barnes, C. R. Plant Life. Henry Holt.....	1.12
Bergen, J. Y. Elements of Botany. Revised ed. Ginn & Co.....	1.00
Bessey, C. E. Essentials of Botany. Henry Holt.....	1.12
Campbell, D. H. Elements of Structural and Systematic Botany. Ginn & Co.....	1.25
Caldwell, O. W. Laboratory Manual of Botany. Appleton.	
Clark, C. H. Laboratory Manual in Practical Botany. Amer. Book Co.....	.96
Clements and Cutter. Laboratory Manual of High School Botany. University Publishing Co. (Lincoln, Nebr.)	
Coulter, J. M. Plant Relations. Appleton.....	1.10
Plant Structures. Appleton.....	1.20
Leavitt, R. G. Outlines of Botany. American Book Co.....	1.00
Setchell, W. A. Laboratory Practice for Beginners in Botany. MacMillan .....	.90
Spalding, V. M. Guide to the Study of Common Plants. D. C. Heath	

BOOKS FOR GENERAL REFERENCE.

Bergen and Davis. Principles of Botany. Ginn & Co.	
(Just out, and a very satisfactory book, especially on the lower forms.)	
Ganong. The Teaching Botanist. MacMillan.	
Strasburger, Schenck, Noll, and Schimper. A Textbook of Botany. (English Ed.) MacMillan.....	4.50

Chamberlain, C. J. Methods in Plant Histology. Univ. Chicago Press	2.25
Peirce, G. J. A Textbook of Plant Physiology. Henry Holt.	
Ganong, W. F. A Laboratory Course in Plant Physiology. Henry Holt.	
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Bailey, L. H. Plant Breeding. MacMillan.....	1.25
Clements, F. E. Research Methods in Ecology. Univ. Pub. Co. (Lincoln, Nebr.)	3.00
Goebel, K. Organography of Plants. (English Ed.) 2 vols. Clarendon Press. (A splendid work, thoroughly up to date.)	
Green, J. R. An Introduction to Vegetable Physiology. J. & A. Churchill, 7 Great Marlborough St., London.....	3.40
Grout, A. J. Mosses with a Hand Lens. Sold by the author, Brooklyn, N. Y.	1.10
Jackson, B. D. A Glossary of Botanic Terms. Lippincott.....	1.50
Kerner and Oliver. Natural History of Plants. Henry Holt....	15.00
(Expensive, but worth every dollar it costs. The best single reference book of them all. In 4 vols.)	
Livingston, B. E. The Role of Diffusion and Osmotic Pressure in Plants. Univ. Chicago Press.....	1.50
Lloyd and Bigelow. The Teaching of Biology in Secondary Schools.	
MacDougal, D. T. Experimental Plant Physiology. Henry Holt	1.00
Practical Textbook of Plant Physiology. Longmans, Green & Co.	2.00
Pfeffer, W. Physiology of Plants. Clarendon Press. 3 vols...	16.00
(The great standard work on Plant Physiology)	
Underwood, L. M. Moulds, Mildews, and Mushrooms. Henry Holt	1.50
Our Native Ferns and Their Allies. Henry Holt.....	1.00
Vines, S. H. A Student's Textbook of Botany. MacMillan.	
Warming, E. A Handbook of Systematic Botany. (English Ed.)	3.75

MANUALS, FLORAS, ETC., FOR SYSTEMATIC BOTANY IN WASHINGTON.

Piper, C. V. Flora of the State of Washington. Contributions U. S. National Herbarium. Vol. XI. Secretary of Agriculture. Washington, D. C.

(This is the one complete work upon the flora of the state. It contains a complete list of all plants which have been collected in the state, and is fully equipped with keys to genera and species. No family keys are given, and there are no descriptions. It is the only authoritative work on the whole flora.)

Piper and Beattie. Flora of the Palouse Region. Sold by the Washington State College, Pullman, Wash.....	.65
Covers a region within a radius of 21 miles of Pullman.	
Howell, Thos. Flora of Northwest America. Sold by the author, Creighton, Ore.	5.00
Sargent. Manual of the Trees of North America. Houghton, Mifflin & Co.	6.00
Watson, S. Botany of California. 2 vols. Sold by the Gray Herbarium, Cambridge, Mass.	

EXPERIMENT STATION AND GOVERNMENT PUBLICATIONS.

Many of these can be obtained free upon application; for the more technical ones, especially of government publication, a small price is charged. For all publications of the United States Department of Agriculture address the Secretary of Agriculture at Washington, D. C. The address of each Experiment Station is given in the list of Experiment Stations appended below. In each case address the Director. Always state that the bulletin is for the High School Library. Any Experiment Station will send you free a list of its available bulletins, and from this list you can pick out the ones which to you seem valuable, and ask for them in detail. Do not ask a station to send you all of its available ones; ask for the particular ones which are of value to you.

LIST OF STATE EXPERIMENT STATIONS AND THEIR LOCATIONS.

Alabama	Auburn
Alaska	Sitka
Arizona	Tucson
Arkansas	Fayetteville
California	Berkeley
Colorado	Fort Collins
Connecticut (State)	New Haven
Connecticut (Storrs)	Storrs
Delaware	Newark
Florida	Lake City
Georgia	Experiment
Hawaii	Honolulu
Idaho	Moscow
Illinois	Urbana
Indiana	Lafayette
Iowa	Ames
Kansas	Manhattan
Kentucky	Lexington
Louisiana	Baton Rouge
Maine	Orono
Maryland	College Park
Massachusetts	Amherst
Michigan	Agricultural College

Minnesota	St. Anthony Park
Mississippi	Agricultural College
Missouri	Columbia
Montana	Bozeman
Nebraska	Lincoln
Nevada	Reno
New Hampshire	Durham
New Jersey	New Brunswick
New Mexico	Agricultural College
New York (State)	Geneva
New York (Cornell)	Ithaca
North Carolina	Raleigh
North Dakota	Agricultural College
Ohio	Wooster
Oklahoma	Stillwater
Oregon	Corvallis
Pennsylvania	State College
Porto Rico	Mayaguez
Rhode Island	Kingston
South Carolina	Clemson College
South Dakota	Brookings
Tennessee	Knoxville
Texas	College Station
Utah	Logan
Vermont	Burlington
Virginia	Blacksburg
Washington	Pullman
West Virginia	Morgantown
Wisconsin	Madison
Wyoming	Laramie

Some bulletins published by experiment stations which are useful in High School Botany are: California, 146, 148, 158, 159; Colorado, 96, 103; Delaware, 66; Florida, 68, 70, 32; Idaho, 38; Indiana, 26; Iowa, 70, 77, 83, 84; Kansas, 120, 127, 133, 139; Kentucky, 24, 78, 84, 124; Maryland, 100, 103, 108; Massachusetts, Reports for 1904, 1905, 1906; Maine, 104, 125; Michigan, 33, 236; Minnesota, 89, 95, 96; Montana, 36, 56; Nebraska, 88; Nevada, 61; New Hampshire, 106, 119; New Jersey, 180, 192; New York (Cornell), 121, 145, 164, 168, 193, 227; New York (State), 269, 279; North Carolina, 186, 194; North Dakota, 59; Ohio, 149, 158; Oklahoma, 54, 60; Washington, 41, 45, 59, 60, 70, 75.

UNITED STATES DEPARTMENT OF AGRICULTURE.

One of the most useful botanical series published by the Department of Agriculture is that put out by the Bureau of Plant Industry. Some of the most important bulletins in this series are given below. As a rule they can only be gotten by the payment of a small price, which is appended to each in the list.

BUREAU OF PLANT INDUSTRY.

1. Relation of Lime and Magnesia to Plant Growth.....	\$.10
2. Spermatogenesis and Fecundation of <i>Zamia</i>.....	.20
3. Macaroni Wheats .....	.20
4. Range Improvement in Arizona.....	.10
7. The Algerian Durum Wheats.....	.15
9. The North American Species of <i>Spartina</i>.....	.10
11. Johnson Grass .....	.10
14. Decay of Timber and Methods of Preventing It.....	.55
16. Germination of Spores of <i>Agaricus campestris</i>.....	.10
19. Kentucky Blue Grass Seed.....	.10
20. Manufacture of Semolina and Macaroni.....	.15
22. Injurious Effects of Premature Pollination.....	.10
29. The Effect of Black Rot on Turnips.....	.15
30. Budding the Pecan.....	.10
31. Cultivated Forage Crops of the Northwestern States.....	.10
33. North American Species of <i>Leptochloa</i>.....	.15
34. Silkworm Food Plants.....	.15
37. Formation of the Spores in <i>Rhizopus</i> and <i>Phycomyces</i>.....	.15
38. Forage Conditions and Problems in Eastern Oregon and Eastern Washington .....	.15
39. The Propagation of the Easter Lily from Seed.....	
41. The Commercial Grading of Corn.....	.10
43. Japanese Bamboos .....	.10
44. The Bitter Rot of Apples.....	.15
45. The Physiological Role of Mineral Nutrients in Plants.....	.05
46. The Propagation of Tropical Plants.....	.10
47. The Description of Wheat Varieties.....	.10

A good many more such bulletins have been published, but these will suffice to show the general character of them. The complete list may be had from the Secretary of Agriculture.

The **Farmers' Bulletin Series** is sent **free** to all applicants. Each teacher should apply for a list of the available ones and should get all that he considers of interest to himself and his pupils. Many valuable bulletins are found in this list.

The Contributions of the United States National Herbarium is another series of great botanical value. These cannot, however, be obtained free. Apply to the Secretary of Agriculture for a list giving the prices.

BOTANICAL MAGAZINES.

- The Botanical Gazette. University of Chicago Press, Chicago, Ill. \$5.00.
 Bulletin Torrey Botanical Club. Columbia University, New York, N. Y.
 The American Botanist, Binghamton, N. Y.
 The Plant World, Lancaster, Pa.
 The Fern Bulletin, Binghamton, N. Y.
 Muhlenbergia. Published by A. A. Heller, Los Gatos, Calif.

PRELIMINARY BULLETIN

**The Study of English in the
High Schools.**

HIGH SCHOOL BULLETIN No. 2.

PREFACE.

At a conference of High School Teachers of English, held at the University of Washington, Feb. 22 and 23, 1907, the following committee was appointed to prepare and publish this Bulletin: Dean A. R. Priest, Mr. J. E. McKown, Mr. W. N. Garlick, Miss Celia Shelton, Miss Elizabeth Simpson, Mrs. R. A. Small and Miss Ida K. Greenlee.

I suggest that teachers of English make a careful study of this Bulletin, in order that they may be able to assist the Committee in the preparation of the more comprehensive Bulletin which will be issued later.

R. B. RYAN,

Superintendent of Public Instruction.

D. OF D.
AUG 27 1910

THE STUDY OF ENGLISH IN HIGH SCHOOLS.

The following outline may be of some assistance to the teacher who has charge of the English in the rural schools. It is made in conformance with the entrance requirements of the various state universities and colleges. In the main it follows a four-year outline but it may be so abridged as to meet the necessities of a high school that has adopted a three-year plan.

This assignment is based upon the thought that there has been a systematic course in English carried on in the grades preceding the high school work. However, if the pupils have not had fair grounding in English literature in the grades before the ninth, then the supplementary or home reading may be so assigned as to include the most fundamental reading covered, in general, by a system of graded schools.

The principal thing for the teacher to accomplish after all, is to create a desire in the mind and heart of the pupil for the best in literature. This can be done in only one way—keep the child from reading what appeals to his ruder nature by supplying him with books and poems that will bring out his better self.

The only way to learn to read is by reading. It is not enough to simply have one child read a story book and then *tell* the *story* to his class mates. The reader of the book is the only pupil who truly profits, for he is the only one who sees the sentence structure, the author's real personality; and what the pupil is to learn from the study of English is not solely the story, nor is it the sentiment, or moral lesson, or appeal to his higher nature; but he is to profit by seeing how the author relates his sentences, his paragraphs, etc., so as to make the reader see the thought as the writer sees it. It is therefore of the utmost importance in the teaching of English that every pupil sees for himself the printed page.

COURSE FOR FIRST YEAR IN HIGH SCHOOL.

Five times a week.

Two days given to composition.

Three days to the literary reading.

TOPICS AND AUTHORS.

1. Ivanhoe..... Scott.

2. Lady of the Lake.....Scott.

These two are to be studied carefully. A suggestive outline for study will be found at the end of the First Year's Course.

3. The Ancient Mariner..... Coleridge.

4. The Vision of Sir Launfal.....Lowell.

5. The Merchant of Venice.....Shakespeare.

6. The Sketch Book, Parts of..... Irving.

Nos. 3, 4, 5, 6, are to be read aloud, in class, by the pupils. Whenever the occasion demands, the teacher should read aloud to the class until the proper atmosphere is felt. These books are explained by the teacher to the pupils, they in turn being on the lookout for *figures of speech, plot of story, style of sentence, characterization of persons in the story* and any other point that would materially aid a pupil in the reading of a story by himself.

In connection with this year's work, every pupil should memorize at least one short poem every month. (A list for this purpose is appended at the close of this outline.) Whenever there is found a choice bit in the author studied, the pupil should commit it, being careful to notice where it occurs, and the circumstances calling it forth. In addition to the reading, there will be found excellent topics for conversation which might furnish the oral composition required in the course. To become a good talker is one of the first requisites of a thoro education in English.

The theme work of this first year should be, very largely, short paragraphs developed during the recitation together with one formal theme every three months, of from ten to thirty sentences, written out side of class and brot, correctly margined, indented, indorsed, with topic capitalized, to the teacher who should talk it over with the pupil.

The pupil should make a note of his mistakes and hold himself responsible for the same in his next issue. Do not ask a pupil to copy or rewrite his theme. Instead, let him keep a note of his mistakes and, in future themes, avoid the same errors.

A LIST OF POEMS FOR MEMORIZING.

The pupil may make his own choice.

Inchcape Rock.....	Southey.
Burial of Sir John Moore.....	Wolfe.
Abou Ben Adhem.....	Hunt.
Ye Banks and Braes o'Bonnie Doon.....	Burns.
Three Fishers.....	Kingsley.
Death of the Flowers.....	Bryant.
To a Water-fowl.....	Bryant.
XIX Psalm.....	Bible.
The Rhodora.....	Emerson.
The Chambered Nautilus.....	Holmes.
Arnold Winkelreid.....	Montgomery.
Breathes there a Man.....	Scott.
The Cloud.....	Shelley.
The Bugle Song.....	Tennyson.
Daffodils.....	Wordsworth.
The Sea! the sea!.....	Procter.
Cleon and I.....	Mackay.
The Spacious Firmament on High.....	Addison.
The Planting of the Apple Tree.....	Bryant.

National Hymns—Marseillaise—Men of Harlech—Watch on the Rhine—America—Battle Hymn of the Republic.

SUGGESTIVE QUESTIONS FOR USE IN THE STUDY OF THE VARIOUS BOOKS IN
THE ENGLISH COURSE FOR HIGH SCHOOLS.

IVANHOE.

Give some general facts in connection with the publication of *Ivanhoe*, such as:

When was it published?

Was *Ivanhoe* a historical character?

How does *Ivanhoe* rank among Scott's works?

Why did Scott change from verse to prose?

The story proper:

What is the time of the story? The location?

How is the story introduced? Formally or informally?

What is the purpose of the conversation between Gurth and Wamba in Chap. I.?

How many characters have been introduced in Chap. I.; viz., in person—by reference?

What have you been told of Norman customs and laws—of Saxon customs and laws?

What have you been told of the country?

Trace, thus far, the hints as to the feeling of Cedric and Rowena towards Cedric's son.

Summarize the action taking place through Chapters III., IV., and V. noting the successive appearance of the different characters.

In Chapter VIII., what effect did Scott wish to secure by the delay in the tournament?

When does Rebecca begin to show her interest in the Disinherited Knight?

After learning positively that the Disinherited Knight is *Ivanhoe*, go back and trace all the hints that lead up to this discovery.

QUESTIONS ON IVANHOE.

What powerful dramatic climax is there in Chapter XXX.?

How does Cedric become reconciled with *Ivanhoe*?

Is it effective to have *Ivanhoe* win, not by force of arms, but by chance at the end of Chapter 43?

Are there any reasons why it would not have been reasonable to have him win by superior strength?

SCENES.

Point out a scene illustrating some one of the following matters:

1. Presenting portraits of the persons concerned.
2. Containing the germ from which subsequent action is to spring.
3. Designed chiefly for contrast and relief.
4. For spectacular effect.
5. One in which the action moves very rapidly.
6. Another in which the action is slow.
7. One in which the author goes back to pick up the thread of the story.

CHARACTERS.

Point out examples of each of the different ways of revealing character.

1. By direct comment of the author.
2. By what the character says and does.
3. By what other people say about the character.
4. By the effect the character has on others.

How does our interest in the fortunes of Richard compare with our interests in the fortunes of Ivanhoe?

In Rebecca with that of Rowena?

VOCABULARY.

Make a list of words found in two or three pages that refer to ancient manners and customs.

Is the principle of choice precision or picturesqueness?

Notice carefully in the reading such grammatical constructions as are not now regarded correct.

THE LADY OF THE LAKE.

Write a short biography of Walter Scott.

Why were his novels published under different names?

What was Scott's connection with the "romantic movement" in literature?

Why did Scott change from poetry to prose?

What were the distinguishing qualities of the literature of the eighteenth century?

CONSTRUCTION.

Is there anything that has taken place before the opening of the poem that has to be understood before we can thoroughly appreciate the story?

How are the previous fortunes of the Douglas family related?

What purpose in the plot does the minstrel serve throughout?

Describe the chase. Is the action rapid or slow?

What was Scott's purpose in introducing the songs?

What is the purpose of Fitz-James' dream?

When is Roderick Dhu first mentioned?

How does Canto III advance the plot?

Describe the scene where Roderick Dhu calls his men from copse and heath.

Does the combat between James and Roderick seem a real fight?

Why was Roderick preserved to die in the castle Stirling?

How was the fight between Clan-Alpine and the Earl of Mar described?

Does Scott employ incidents for the sake of dragging in description?

What is the best thing in his poem: nature description, plot-construction, character description, or the portrayal of old life and customs?

Does Scott keep closely to the geography of the region of his tale?

Describe the approach of Roderick's boats and the carrying of the fiery cross to arouse the clan.

SECOND OR SOPHOMORE YEAR.

Five lessons a week.

Three days given to Composition and Rhetoric.

Two days given to Literary reading.

TOPICS AND AUTHORS.

1. Silas Marner—George Eliot. Study.
2. De Coverly Papers—Addison. Read.
3. Life of Goldsmith—Irring. Study.
4. Macbeth—Shakespeare. Study.
5. Sohrab and Rustum—Arnold. Read.

These books are all to be discussed in class. Notes covering them will be found appended at the close of the Second Year's Outline.

A text-book on Rhetoric should be in the hands of the pupils. Stress should be laid on fundamentals in English. There should be some written work each week such as paragraphs, etc., written with a conscious aim on the part of the pupil; for instance, he should be able to develop a good paragraph from an assigned topic sentence. Every recitation should be looked at from the standpoint of *oral composition*. Besides the weekly paragraphs, there should be a formal written production of from fifteen to forty sentences once every six weeks, attention being directed here to the logical sequence of thot. It is the best plan to have the formal themes written in the pupil's note-book *before* any corrections are made by the teacher. A great deal of time is wasted by the pupil in *copying* the theme *after* the corrections are made by the teacher. While it is always wise to insist on the making of drafts, carefully blocking out the thot, as it were, still it is scarcely ever worth while to set the child to *copying* the thing he wrote in the heat of invention. Let him go over his work carefully and see if he might not better have used a link-word here, a correlative there, or wherein a synonym might do better than the word used. A great many devices may be used by the ingenious teacher to aid the pupil *in seeing for himself*.

Every high school pupil should keep a list of words, new to his vocabulary, and consciously use them in response to questions, discussions in class, etc. It is a good plan to learn a new word each day for a month: after that time, establish a clearing house and do a regular systematic banking business for words as a Friday afternoon diversion.

In addition to the prescribed books that are to be studied, the pupil should read from 1000 to 1500 pages from a list made out by the teacher, she being familiar with the resources of the library at her command.

As in the Freshman year, the pupil should be held for memory work, especially the good thots found in the authors studied.

The following list of books is suggestive for a Sophomore class:

Golden Treasury.....	Palgrave.
Jungle Books.....	Kipling.
Up From Slavery.....	Booker T. Washington.
The Bottle Imp.....	Stevenson.
Conquest of Granada.....	Irving.
The Making of An American.....	Jacob Riis.
A Man Without a Country.....	Hale.
Birds and Bees.....	Burroughs.
The Oregon Trail.....	Parkman.
Autobiography.....	Franklin.
The Courtship of Miles Standish.....	Longfellow.
Lorna Doone.....	Blackmore.
Tales of Shakespeare.....	Lamb.
Marmion.....	Scott.
Quentin Durward.....	Scott.
Cranford.....	Mrs. Gaskell.
Pilgrim's Progress.....	Bunyan.
Joan of Arc and the English Mail Coach..	DeQuincey.

SILAS MARNER.

DEVELOPMENT OF THE PLOT.

- How much of the story had taken place before the novel opens?
 How is the past history of Marner introduced?
 How many of the chapters are introductory?
 What did the false accusation and condemnation have to do with the plot?
 How many plots are there? How are they connected?
 Select the chapters which have to do with the Cass plot, those with the Marner plot and those with both.
 Why is the incident of the earthenware pot introduced?
 How does the Wildfire incident connect the two plots?
 What part does Molly have in the plot?
 How is Godfrey's past life given?
 What is the purpose of Chapter six?
 Compare the announcement of the robbery with any other dramatic scene in the book.
 Does the quarrel scene between Godfrey and the Squire advance the plot?
 Describe the New Year's party at the brick house.
 Why does George Elliot make Silas subject to catalepsy?
 Why portray him with defective eye sight?
 How long a time elapses between the two parts of the book?
 How did you find out what has taken place in Marner's condition during this time?
 Where is the climax in the story?

CHARACTERS.

Classify the characters into groups.

How many are useless to the plot?

Are the characters shown by action, conversation, or the author's comment?

METHOD AND STYLE.

Which is the more important in *Silas Marner*, plot or character?

Are George Eliot's characters drawn from real life?

Does she deal with great actions, or with motives and impulses?

How did George Eliot's scholarship affect her style?

Note her use of conversation.

How has she attained her two primary objects in the writing of *Silas Marner*?

MACBETH.

State briefly and clearly the exact situation presented in Act I., Scene II.

Why should an account of Cawdor's death be given at the beginning of Act I., Scene IV.?

In how many ways are we interested in Macbeth before he appears in person?

Name the principal characters in the play.

When were they introduced? How?

THE PLOT.

What is the incident with which the action of the play begins?

With what specific event does the resolution of the play begin?

There are three kinds of reaction against Macbeth; namely, spiritual reaction within his own soul, political reaction and supernatural reaction. Give specific examples of each one.

Is there any sub-plot in this play?

CHARACTERS.

Is Macbeth shown to be worthy to be king?

Find the points of contrast between Banquo and Macbeth.

Is Lady Macbeth's estimate of her husband correct?

What motives cause Macbeth's hesitation in Act I., Scenes V. and VII.?

Does mere physical fear account for Macbeth's actions and hallucinations in Act II., Scenes I. and II.?

Is Lady Macbeth's courage born of greater wickedness than Macbeth's?

Does she justify the epithet "Fiend-like Queen" applied to her in Act V., Scene VIII.?

LIFE OF GOLDSMITH.

Give the dates of Goldsmith's death and Irving's birth?

What method of treatment did Irving choose for his biography of Goldsmith?

What was the chief aim of this biography?

Was Irving a sympathetic interpreter of the character of Goldsmith?
 Contrast the dispositions of the two men.

From what source principally did literary men of the eighteenth century derive their incomes?

Describe the bookseller of that time—the hack-writer. What was their relation to each other?

Contrast the period of the bookseller with the period of “patronage” and the period of the modern publisher.

During what period of American history did Goldsmith write?

Name three of Goldsmith’s most famous English contemporaries.

In the “Life of Goldsmith” read the first part, paying close attention to the following topics: namely, birth and parentage, childhood, education, improvident habits, efforts to enter the profession, travels on the continent, return to England and settlement in London, beginning of a literary career.

Make an estimate of Goldsmith as to his personal appearance, his bearing in company, his conversational powers, his personality, his disposition, his character.

THIRD OR JUNIOR YEAR.

Five times a week.

One day given to the study of the History of Literature, three to the assigned reading, and one to grammar.

The following outline may be of assistance.

I. *The Anglo-Saxon.*

A. Location of the three tribes.

1. The Saxons, dwelling near the mouth of the Elbe river.
2. The Angles, inhabiting the southwest part of Denmark.
3. The Jutes, extending north of the Angles into modern Jutland.

E. Their religion.

1. Primitive gods were—
 - a. Tiu, deity of war.
 - b. Woden, patron of travelers.
 - c. Thor, god of thunder.
 - d. Frea, mother of the gods and giver of fruitfulness.

(These gods are commemorated in our names for the days of the week.

C. Their singers.

1. The *gleeman*, who did not create his own songs, but chanted what he had learned from others.
2. The *scop*, the poet proper who wove together the history and the legend into song.

D. Their poems.

1. Widsith—The Far-Wanderer.
2. Deor’s Lament.
3. Beowulf,—The story of Beowulf should be either read or told to the class.

II. *The Anglo-Saxon Invasions.*

(During the years of struggle between the Celts of Britain and the Jutes, Angles, and Saxons, there began to grow up, about the person of an obscure Celtic leader, that cycle of stories which has been reproduced for the present generations in the legends of Arthur.)

A. The Christianizing of England.

1. From Rome, settling in the south.
2. From Ireland, settling in the north.
 - a. Establishing monasteries.
 - aa. Whitby—Jarrow.

In the monastery at Jarrow lived the famous scholar Baeda, known to the world as the "Venerable Bede." He wrote many books nearly all in Latin. It is from a passage in one of his books, that we know the story of Caedmon, a cowherd of Whitby, the first poet of Christian England. (Here the pupils should read the story of Caedmon for themselves, or it should be read to them by the teacher.)

Summary of Anglo-Saxon poets; viz., The Gleeman, the Scop, Bede, Caedmon, Cynewulf, King Alfred; and their works; viz., Widsith—Deor's Lament—Beowulf—Some shorter poems—The prose of Alfred.

III. *The Norman-French Period of Literature.*

A. Effects of the Norman Conquest.

1. French was the language spoken.
2. Anglo-Saxon Chronicle, however, was still continued.
3. In 1200 A. D. Anglo-Saxon tongue reappeared as the English language with but little element of French in its makeup.

B. The poets of the Norman-French.

- a. The Trouveres, poets who composed and recited romances of Italy and the East.
- b. Geoffrey of Monmouth who wrote in Latin a chronicle of the legends of Arthur.
- c. Layamon's Brut—a story of the Founding of the Round Table.
- d. Imitators of the Norman-French romances. (Almost all of the English romances of the 13th and 14th centuries are free renderings from the French originals.

IV. *The Age of Chaucer.*

- A. His Canterbury Tales.
- B. John Gower.
- C. John Wyclif—His Bible.
- D. Wm. Langland—Piers the Plowman.
- E. James I. of Scotland—The King's Quair.
- F. Sir Thos. Malory—Morte D'Arthur.
- G. Translations made by unknown persons of "Travels of Sir Jno. Mandeville."

V. *(The Renaissance period should be explained to the class.)*

- A. More's—Utopia.
- B. Roger's Ascham—The Schoolmaster.

- C. Reconstruction of the Bible by Wm. Tyndale and Miles Coverdale.
- E. Sir Thos. Wyatt and E. Surrey's—Translations and Lyrics.
- F. Thos. Sackville—Mirror for Magistrates.

VI. *Age of Elizabeth.*

- A. John Lily—Euphues.
- B. Sir Philip Sidney—Arcadia.
- C. Many popular writers such as Greene's Repentance. Thomas Nash's Jack Wilson. Thomas Lodge's Rosalynde. (Which furnishes the story of As You Like It.) Richard Hooker's prose, five volumes.
- D. Edmund Spenser's "Shepherd's Calendar"—Colin Clout's "Come Home Again"—"Faerie Queene" and several "Hymns," together with his shorter poems, the most notable of which is the "Prothalamion."
- E. Marlowe and Chapman's "Hero and Leander."

(The great fault of the poets and other writers of the time lay in the fact that they never separated the proper subject matter of poetry from that of prose. They gave verse form to all things alike—politics, philosophy, geography, and science. Elizabeth's reign saw the best products of both the Lyric and the Drama.)

VII. *The Drama before Shakespeare.*

- A. Secular sources of the drama.
 - 1. The Masque—paved the way to the drama.
- B. Religious source of the drama.
 - 1. Mass-service of the Catholic church especially at Christmas-tide and Easter. The little ceremonies performed at that time gradually became detached from the service, moving from the church to the yard and later to the village green until the ceremonies finally passed from the hands of the priests into the control of the trade-guilds who made use of them to celebrate special days producing the Miracle and, later on the Morality plays. From similar sources came also the Interludes, and the Robin Hood plays.

In addition to these plays, which were given by the trade-guilds, it became the fashion for school masters to present the old Latin comedies on the stages of grammar schools, with the students as actors. This was productive of the *first English* comedy—"Ralph Royster Doyster." The second was "Gammar Gurton's Needle." The classical influence, however, was greater in tragedy. Between 1560 and 1581 ten tragedies of Seneca were freely translated. Classic drama drew a very sharp line between comedy and tragedy, admitting no comic element into a serious play. The English drama, on the contrary, from the miracle plays down, set comedy side by side with tragedy. It mingled them as they are mingled in real life.

VIII. *The Drama of Shakespeare.*

A. Study his life.

1. Earliest plays.
2. Earliest masterpieces.
3. Historical plays.
4. Comedies.
5. Tragedies.

B. His contemporaries.

1. Ben Jonson.
 - a. Every Man in His Humor.

(In one respect Ben Jonson's comedies are the most interesting plays in the whole Elizabethan repertory; viz., in the vivid pictures they give of London life.)

2. Francis Beaumont.
3. John Fletcher.

(These last two always wrote in partnership.)

4. Francis Bacon.
 - a. His Essays.

IX. *The work of the preachers.*

A. John Doone.

B. Peremy Taylor.

(This carries the literature up to the time of the Stuart kings. Something of the condition of times may be told the class in order to bridge over the pastoral poets, meaning by that term the poets who wrote of country life, nature in all her aspects.)

(It would be well to let the class memorize the names of the great writers beginning with Chaucer, *e. g.*

Chaucer—*Canterbury Tales*.

Spenser—*Faerie Queene*.

Etc.)

Beginning with Jno. Milton, the history of literature is easily found and can be planned by the teacher in charge. Do not try to cover too much ground. Let the child thoroughly master the frame work, as it were, and leave the finishing of the structure for his college course.

The day set apart for the review of English grammar should be faithfully adhered to and the rudiments of the language firmly fixed in the minds of the pupils. (Suggestions.)

1. All forms of the nominative case should be illustrated.
2. The rules for forming plurals.
3. All kinds of clauses.
4. The difference between the co-ordinate and the subordinate connective.
5. The use of the correlative.
6. Agreement of verb with subject.
7. The use of substantives.

BOOKS TO BE USED AS TEXTS DURING THE JUNIOR YEAR OF HIGH SCHOOL.

In addition to the study of English Literature as outlined, the following authors and their works are to be read and studied with reference to their places in the making of English Literature.

A Tale of Two Cities.....Dickens.

Idyls of the King.....Tennyson.

Gareth and Lynette.

Lancelot and Elaine.

Passing of Arthur.

Golden Treasury..... Palgrave (1st series).

Books 2 and 3, with special attention to Dryden, Collins, Gray, Cowper, and Burns.

Essays of Elia..... Lamb.

SENIOR YEAR.

Five lessons a week.

Three devoted to the *correct* reading of subject matter.

Two devoted to written work and discussion.

During this year a great deal of attention should be given to analyzing or discussing the formation and structure of the famous speeches, particular stress being laid on Burke's "Conciliation with America."

The following books are to be read and discussed in class:

Burke's "Conciliation" Speech.

Macaulay's Essay on Milton.

Shakespeare's Julius Cæsar.

Milton's Minor Poems.

Carlyle's Essay on Burns.

BURKE'S SPEECH OF CONCILIATION.

A. History of the Discussion.

1. The proposition is peace. (first eight paragraphs.)

B. The two capital questions.

1. Whether you ought to concede.

2. What your concessions ought to be. (paragraphs 9-17, inc.)

C. Commerce—with the colonies—of the colonies.

1. Compare with Pennsylvania.

2. Fisheries. (Paragraphs 17-37, inc.)

D. American love of freedom.

1. Descendants.

2. Protestantism.

3. Legal Studies.

4. Distance from center of authority.

5. Self-government in America.

6. Population cannot be checked.

7. Unalterable character of the Americans. (Para. 37-59, inc.)

- E. Indicting a whole people.
 - 1. Criminal prosecution inexpedient.
 - 2. Not a question of abstract right. (Para. 59-66, inc.)
- F. Taxation is useless.
 - 1. Defiance of fact and experience.
 - 2. Cases of Ireland, Wales, Chester, Durham.
 - 3. Representation impossible. (Para. 66-90.)
- G. Discussions of Resolutions.
 - 1. Competence of Colonial Assemblies.
 - 2. Liberality of the Colonies.
 - 3. Theory vs. experience. (Para. 91-108.)
- H. Reasons for repeal.
 - 1. Parliamentary precedence.
 - 2. Union of interests desirable.
 - 3. A labyrinth of detail. (Para. 109-132.)
- I. The power of refusal.
 - 1. Revenue from America impossible.
 - 2. Magnanimity the truest wisdom. (Para. 133-140.)

The following are good books for the teacher's reference in the study of English Literature.

A History of English Literature..... Moody and Scott.
Published by Scribner's, New York.

A History of English Literature..... Saintsbury.
Macmillan Co., New York.

Development of English Literature..... Welsh.
Two volumes. S. C. Griggs & Co., Chicago.

History of English Literature..... Halleck.
American Book Co., Chicago.

High School Bulletin No. 3.

A Study of Four Year High Schools in Washington.

ISSUED BY THE
DEPARTMENT OF EDUCATION

HENRY B. DEWEY,
Superintendent of Public Instruction

OLYMPIA, WASH.:
C. W. GORHAM, PUBLIC PRINTER.
1908.

A STUDY
OF
FOUR YEAR HIGH SCHOOLS
IN THE
STATE OF WASHINGTON

BY
THOMAS E. LATIMER, A. B.
Student in the Educational Seminary
University of Washington

WITH
INTRODUCTION

BY
EDWARD O. SISSON, Ph. D.
Director of the Department of Education
University of Washington

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D. OF D.
AUG 27 1910

INTRODUCTION.

This Study of the Four Year High Schools of the State of Washington, was originally suggested by Professor F. G. Bonser's pamphlet on the High Schools of Illinois in 1902, to which we wish to make grateful acknowledgment. The work on the present study was first undertaken by Miss Grace Jarvis in the year 1906-7; owing to difficulties which are almost always found in the first attempt of a work of this sort, Miss Jarvis was unable to complete her study for publication. The work was taken up anew early in the current academic year by Mr. Latimer, and is now published through the courtesy of the State Superintendent of Public Instruction.

We wish in the first place to acknowledge gratefully the help given by school authorities, particularly high school principals, in obtaining the data; in many cases this has thrown a great deal of extra work on those who were already heavily loaded.

We realize that this report is sure to fall short of the ideal in many respects. It is likely to contain errors and discrepancies, some of them real and some of them only apparent, the latter being due to different interpretations of the questions upon which the study was based. We should have been glad to have had another month in which to organize the data more thoroughly and present them more satisfactorily but we find ourselves shut up to the alternative of publishing the study now in the best form which we can give to it, or allowing it to get out of date and so be unworthy of publication at all.

School authorities and others interested are urged to give us the benefit of their judgment on two questions:

1. Would it be desirable to make such a report upon the high schools every year, so as to show development; with the understanding of course that as soon as possible the smaller high schools having less than four year courses would be included?

2. If it is desirable to publish such a study each year, in what ways can the present plan be improved? Suggestions on this point should be as definite as possible. What items here included can well be omitted? What new items should be added? In what way can the gathering of data be made more effective and easier for all concerned?

In conclusion I wish, on behalf of the Department of Education, to express appreciation of the tireless energy and the high intelligence which Mr. Latimer has brought to the task. No one who has not undertaken such a study can realize the amount of labor and degree of perseverance necessary to carry it to a successful conclusion.

A STUDY OF FOUR YEAR HIGH SCHOOLS IN THE STATE OF WASHINGTON.

The data for this paper were secured by sending to the four year high schools of the state the blank used by the Committee on Accredited Schools of the University of Washington, upon which was secured the following information:

1. Curriculum—

- a. Subjects taught.
- b. Year in which taught.
- c. Number weeks given subject.
- d. Number periods per week.
- e. Amount accomplished.
- f. Number of units required for graduation.

2. Teachers—

- a. Name.
- b. Qualifications.
- c. Experience.
- d. Subjects taught.
- e. Number of recitations daily.

Additional blanks were also sent to the same schools requesting answers on the following points:

1. Students—

- a. Enrollment by years.
- b. Average age by years.
- c. Number enrolled in each subject.
- d. The occupation of parents or guardians.
- e. Number wholly or in part self-supporting.
- f. Number from outside high school district.
- g. Tuition charged.

2. Graduates—

- a. Total number on records.
- b. Class of 1908.
- c. Number in college.

An attempt was made to reach all of the four year high schools; blanks were sent to the Accredited Schools of the State Board of Education and of the University of Washington, and all other high schools reported by the Superintendent of Public Instruction as having a four year course. Also a notice was inserted in the Northwest Journal of Education asking that four year high schools which had not received blanks should write to the Department of Education and the blanks would be furnished.

Of the 59 four year high schools to which inquiries were sent 56 reported in whole or in part; 55 answered on the regular form of the Accredited Schools' Committee and 42 sent in reports on the supplementary blanks.

The statistics for the United States are quoted from the report of the Commissioner of Education for 1905, and those for Illinois from "A Statistical Study of Illinois' High Schools" by Frederick Gordon Bonser, issued by the University of Illinois in 1902.

A. DATA CONCERNING INDIVIDUAL SCHOOLS.

NAME OF HIGH SCHOOL.	TEACHERS.			Per ct. of total enrollment in district.	High school enrollment.	GRADUATES.								Length of Period in Minutes.	Recita- tion.	Labor- atory.	Weeks in school year.	Num- ber of sub-jects taught.
	Male.	Fem.	Total.			Total.		1908.		In college.								
						Boys.	Girls.	Boys.	Girls.	Boys.	Girls.							
Aberdeen.....S. U.	4	5	9	155	11	50	70	.....	.....	4	.....	13	7	45	90	40	22
Anacortes.....U.	1	3	4	51	8	2	6	.....	.....	5	.....	2	2	45	90	36	20
Arlington.....U.	2	2	4	55	11	4	8	.....	.....	3	.....	4	2	45	90	36	24
Asbun.....U.	1	3	4	74	18	5	8	.....	.....	1	.....	1	4	40 a	60	36	22
Bellingham.....S. U.	8	16	24	669	14	.....	.....	.....	.....	21	57	20	13	45	90	38	26
Blaine.....U.	1	2	3	40	8	1	3	.....	.....	4	.....	0	3	40	80	36	16
Bremerton.....U.	2	2	4	89	16	2	1	.....	.....	1	.....	1	0	45	80	36	25
Buckley.....U.	1	2	3	29	9	6	6	.....	.....	1	.....	5	5	45	45	37	21
Burton.....U.	1	2	3	26	3	0	0	.....	.....	0	.....	0	0	40	40	36	14
Castle Rock.....U.	2	1	3	53	16	3	6	.....	.....	3	6	0	0	45 b	90 d	36	21
Centralia.....S. U.	2	5	7	173	13	.....	.....	.....	.....	.....	.....	11	5	45 b	45 b	38	22
Chehalis.....S. U.	1	5	6	114	15	5	11	.....	.....	7	10	10	5	40	80	36	23
Clarkston.....U.	1	4	5	84	11	.....	.....	.....	.....	4	8	1	2	35	70 c	26	20
Colfax.....S. U.	2	3	5	125	15	.....	.....	.....	.....	7	6	8	9	45	90	36	25
Colville.....S	1	2	3	56	10	3	2	.....	.....	2	2	0	0	40	80	36	20
Coupeville.....S	1	1	2	19	15	.....	.....	.....	.....	.....	.....	3	0	45	90	36	17
Davenport.....S. U.	1	3	4	90	17	40	50	.....	.....	5	4	8	6	40	80	36	23
Dayton.....U.	1	4	5	91	12	.....	.....	.....	.....	4	9	7	0	45	90	36	21
Ellensburg.....S. U.	3	2	5	126	14	8	12	.....	.....	6	6	6	2	40	90 d	38	22
Everett.....S. U.	6	9	15	323	9	64	141	.....	.....	17	16	12	16	47	94	40	26
Fall City.....U.	0	1	1	7	7	0	0	.....	.....	0	0	0	0	25	60	35	14
Garfield.....U.	3	1	4	83	19	23	18	.....	.....	1	8	14	2	45 b	90 d	36	21
Goldendale.....U.	.....	.....	.....	70	.....	26	45	.....	.....	1	5	1	4	.....	.....	.....	.....
Hogulam.....U.	3	3	6	98	10	8	7	.....	.....	2	5	2	1	45	45 e	38	25
Kalama.....U.	1	2	3	25	10	.....	.....	.....	.....	0	2	0	0	45	90	36	19
Kent.....S. U.	2	2	4	83	18	11	30	.....	.....	3	9	7	5	45 b	45 b	36	21
La Conner.....S. U.	1	2	3	35	20	8	12	.....	.....	5	4	1	5	40	80	36	19
Mt. Vernon.....S. U.	2	3	5	77	12	.....	.....	.....	.....	.....	.....	3	1	45	90	36	22
Nooksack.....S. U.	1	1	2	23	14	0	0	.....	.....	2	5	0	0	40 a	80	36	18
North Yakima.....S. U.	1	4	5	349	14	59	79	.....	.....	11	18	13	10	45	90	40	28
Oakdale.....U.	3	0	3	69	16	.....	.....	.....	.....	.....	.....	5	3	45	45	36	20
Olympia.....S. U.	4	4	8	190	14	.....	.....	.....	.....	10	14	24	16	45	90 f	36	23
Palouse.....U.	1	3	4	90	16	47	48	.....	.....	3	6	5	0	45	45 b	36	24
Pomeroy.....U.	1	3	4	33	10	10	25	.....	.....	1	2	0	4	45 b	45 b	36	19
Port Angeles.....S. U.	2	2	4	53	11	35	35	.....	.....	0	8	4	0	45	45	36	17
Port Townsend.....S. U.	2	2	4	96	17	29	61	.....	.....	3	6	9	8	40	80	38	20

Prosser.....S. U.	2	2	4	52	13	.....	.....	.....	5	3	1	1	1	45	90	36	21
Puyallup.....S. U.	1	3	4	131	11	.....	30	.....	9	9	4	4	4	45 b	90 d	38	21
Ritzville.....S. U.	2	4	4	58	13	.....	.....	.....	4	2	5	5	1	40	40	36	23
Seattle, total	66	56	122	3355	.....	.....	.....	.....	164	191	91	98	4	45	90	.....	.....
Ballard.....S. U.	4	6	10	233	.....	.....	20	69	5	17	7	4	4	45	90	40	34
Lincoln.....S. U.	18	21	39	1081	.....	.....	0	0	28	23	0	0	0	45	90	40	41
Washington.....S. U.	44	29	73	2041	.....	.....	.....	.....	131	151	84	94	4	45	90	36	20
Sedro-Woolley.....S. U.	1	3	4	64	9	.....	.....	.....	.....	.....	7	3	0	30	60	40	16
Skykomish.....S. U.	1	1	2	13	20	.....	0	.....	0	0	0	0	0	45	90	36	26
Snohomish.....S. U.	2	6	8	183	19	.....	16	33	7	10	6	4	4	45	90	36	14
South Bend.....S. U.	1	2	3	25	6	.....	4	3	0	0	1	1	1	45	90	36	41
Spokane.....S. U.	34	24	58	1728	12	.....	338	593	43	68	.....	.....	2	45	90	36	26
Sprague.....S. U.	2	1	3	35	12	.....	.....	.....	.....	.....	3	2	2	45	90	36	23
Sumner.....U.	1	2	3	60	16	.....	.....	.....	.....	.....	2	1	1	40	40	36	19
Sunnyside.....U.	3	2	5	88	19	.....	3	4	4	4	3	3	3	45	90 g	36	18
Tacoma.....S. U.	20	29	49	1659	13	.....	.....	.....	39	53	45	55	6	45	90	38	25
Vancouver.....S. U.	3	2	5	150	13	.....	45	55	11	11	9	6	2	45	90	38	21
Waitsburg.....S. U.	1	1	2	75	17	.....	.....	.....	3	1	3	2	2	45	90	40	33
Walla Walla.....S. U.	6	7	13	296	12	.....	66	130	6	26	12	21	4	45 b	90	36	22
Waterville.....S. U.	2	1	3	56	20	.....	.....	.....	5	6	8	4	4	45	90	36	22
Wenatchee.....S. U.	2	3	5	132	15	.....	9	15	5	8	14	3	3	45	90	36	22
Total.....	225	263	488	11,784	.....	.....	975	1,676	433	636	414	348	.....	.....	.....	.....	.....

a. Some 30 minutes.

b. Some 40 minutes.

c. Occasionally 95 minutes.

d. Some 80 minutes.

e. 45 minutes extra twice a week.

f. Some 45 minutes.

g. 45 minutes for Physiography.

S. Accredited by the State Board of Education.

U. Accredited by the University of Washington.

B. THE CURRICULUM.

I. SCHOOLS TEACHING EACH SUBJECT.

	Number of Schools.	Per cent. of total reporting.	Corres- ponding per ct. in Illinois High Schools in 1902.
1. ENGLISH—			
a. Composition.....	55	100.	72.9
b. Rhetoric.....	55	100.	61.8
c. Literature.....	53	95.9	88.3
d. Classics.....	55	100.	.....
2. HISTORY—			
a. General.....	15	27.2	82.3
b. Ancient.....	38	68.4	25.8
c. Medieval and Modern.....	33	59.4	2.9
d. English.....	31	55.8	57.1
e. United States.....	52	94.1	65.2
f. Civics.....	50	90.5	81.
g. Political Economy.....	15	27.2	12.7
3. SCIENCE—			
a. Physics.....	52	94.1	97.4
b. Chemistry.....	22	39.6	50.
c. Botany.....	45	81.6	94.4
d. Zoology.....	15	27.2	88.3
e. Physiology.....	22	39.6	85.6
f. Physiography.....	48	86.9	76.6
g. Astronomy.....	2	3.6	26.5
h. Geology.....	5	9.	16.4
4. MATHEMATICS—			
a. Elementary Algebra.....	55	100.	100.
b. Advanced Algebra.....	53	95.9	.....
c. Plane Geometry.....	55	100.	97.9
d. Solid Geometry.....	53	95.9	63.4
e. Trigonometry.....	7	12.6	5.3
f. Commercial Arithmetic.....	11	19.8	.....
g. Bookkeeping.....	20	36.3	28.2
5. FOREIGN LANGUAGE—			
a. Latin.....	53	95.9	89.9
b. German.....	48	86.9	34.6
c. French.....	8	14.4	8.7
d. Spanish.....	4	7.2	.3
e. Greek.....	3	5.4	11.4
6. MISCELLANEOUS—			
a. Manual Training and Domestic Science.....	9	16.2	3.
b. Drawing.....	14	25.4	27.8
c. Painting.....	3	5.4	.....
d. Music.....	8	14.4	3.3
e. Physical Culture.....	5	9.	5.
f. Debate and Oratory.....	7	12.6	1.3

II. TIME GIVEN EACH SUBJECT.

NOTE.—The upper line represents the number of schools, and the lower the percentage of schools teaching each subject; thus, composition 78.3 means 43 schools teach composition the first year, and this is 78.3 per cent. of the schools teaching composition.

ENGLISH.	Year in Which Taught.										No. of Recitations.		Number of Weeks Taught.										Length of Recitation.				
	I	II	III	IV	I, II, III, IV	I, II, III, IV	I, II, III, IV	I, II, III, IV	I, II, III, IV	I, II, III, IV	4	5	18	35	36	38	39	40	54	25	30	40	45	47			
Composition	43				9	2	1			3	52		1	38	7	1	8			1	1	18	34	1			
	78.3				16.3	3.6	1.8			5.4	94.6			1 869.2	12 7.1	8 14.5			1.8	1 832.7	61.9	1.8					
Rhetoric		47	1		4		2	1		3	52		1	40	8	1	5			1	1	18	34	1			
		85.6	1.8		7.2		3.6	1.8		5.4	94.6			1 872.9	14.5	1 8.9			1.8	1 832.7	61.9	1.8					
Literature			34	6						13	50		1	36	8	1	5	1		1	1	18	32	1			
			65.5	10.9						23.6	94.5		1.9	1 968.3	14.9	1 9.9	2 1.9		1.9	1 933.9	60.4	1.9					
Classics					51		2			2	52		1	40	8	1	5			1	1	18	34	1			
					92.8		3.6			3.6	94.6			1 872.9	14.5	1 8.9			1.8	1 832.7	61.9	1.8					

HISTORY.	Year in Which Taught.										No. of Recitations.		Number Weeks Taught.										Length of Recitation.					
	I	II	III	IV	$\frac{1}{2}$ I	$\frac{1}{2}$ II	$\frac{1}{2}$ III	$\frac{1}{2}$ IV	$\frac{3}{4}$ IV	$\frac{3}{4}$ IV	4	5	12	16	18	19	20	24	35	36	38	39	40	25	30	40	45	47
General		12	2	1						1	14								1	10	3		1	1	1	5	8	
		79.9	13.4	6.7						6 793.3									6.7	66.5	20.1		6.7	6.7	6.7	33.5	53.1	
Ancient	36									2	36				2					22	8	1	5			11	26	1
	94.5	5.5								5.5	94.5			5.5					56.1	22.1	2.7	13.6			29.9	67.4	2.7	
Medieval and Modern	29	2	1			1				2	31						2			20	5	1	5			10	22	1
	87.9	6.1	3.			3.				6.1	93.9						6.1		60	15.1	3.1	15.1			30.3	66.6	3.1	
English	7	19			2		3			1	30			4				1	13	6		7			8	22	1	
	21.7	62.7			6.3		9.3			3.1	96.9			12.4				3.1	44	2	18.6	21.7			24.8	72.1	3.1	
United States										2	50			32	8	6	3	1				2	1	1	15	35	1	
										3 896.2			61.9	15.3	11.4	5.7	1.9					3 8	1.9	1.9	28.5	67.7	1.9	
Civics										2	48			3	29	7	8							1	1	32	62	1
										4.96			6.	58	14.	16.							2.		32.	64.	2.	
Political Economy										1	14				8	2	5						1	1	3	11		
										6 793.3			51	13.5	29.4								6.7	6.7	20.1	73.2		

[illegible]

III. TEXT BOOKS WITH PERCENT OF SCHOOLS USING EACH.

NOTE.—The per cent. is based upon the number of schools which teach the subject concerned.

1. ENGLISH.

a and b. COMPOSITION AND RHETORIC.

Scott and Denny.....	44.4	Huntington	3.7
Lockwood and Emerson.....	25.9	Buchler	1.8
Herrick and Damon.....	16.6	Maxwell	1.8
Gardiner, Kittredge and Arnold.....	11.1	Hill	1.8
Brooks and Hubbard.....	7.4	Espenshade	1.8

*c. LITERATURE.**(1) English.*

Halleck	70.	Johnson	3.3
Pancoast	7 ¹ / ₂	Raub	3.3
Newcomer	6.6	Moody and Lovett.....	3.3
Scudder	3.3		

(2) American.

Pancoast	33.3	Newcomer	20.
Mathews	33.3	Painter	13.3

d. CLASSICS.

Vision of Sir Launfal.....	50.	The Princess	16.3
Julius Caesar.....	50.	Deserted Village	16.3
Ancient Mariner.....	48.1	The Iliad	12.1
Silas Marner.....	48.1	Vicar of Wakefield.....	12.1
Sir Roger de Coverley Papers.....	48.1	Hamlet	10.
Merchant of Venice.....	44.2	Christmas Carol	10.
Burke's Conciliation Speech.....	44.2	The Great Stone Face.....	8.8
Comus	41.6	Lays of Ancient Rome.....	8.8
Lycidas	41.6	The Raven and The Bells.....	6.6
L'Allegro	41.6	As You Like It.....	6.6
Il Penseroso.....	41.6	Cotter's Saturday Night.....	6.6
Macbeth	41.6	The Old Manse.....	4.4
Ivanhoe	39.8	Sesame and Lillies.....	4.4
Lady of the Lake.....	36.7	The Old Apple Dealer.....	4.
Idyls of the King.....	26.8	Evangeline	4.4
Life of Goldsmith, Irving.....	26.8	Songs of Labor.....	4.4
Life of Johnson, Macaulay.....	26.8	Lincoln's Gettysburg Address.....	4.4
Essay on Burns, Carlyle.....	24.6	Lancelot and Elaine.....	2.2
Essay on Milton, Macaulay.....	24.6	The Pioneer.....	2.2
Essay on Addison, Macaulay.....	18.4	King Lear.....	2.2
First Bunker Hill Oration.....	18.4	Enoch Arden	2.2
Snow Bound	18.4	The Scarlet Letter.....	2.2
Emerson's Essays	16.3	Tom Brown at Rugby.....	2.2
Sketch Book	16.3	The Passing of Arthur.....	2.2

2. HISTORY.

a. GENERAL.

Myers	85.7	Colby	7.1
Morris	7.1		

b. ANCIENT.

Myers	56.6	Botsford	10.
West	16.6	Morey	6.6
Wolfson	10.		

c. MEDIEVAL AND MODERN.

Myers	71.4	Adams	10.8
West	17.8		

d. ENGLISH.

Montgomery	43.5	Larned	8.7
Cheyney	21.7	Guest	4.3
Walker	17.4	Andrews	4.3

e. UNITED STATES.

Channing	34.8	Fiske	4.5
McLaughlin	23.1	Mace	2.2
Montgomery	17.8	Coman	2.2
Hart	15.6		

f. CIVICS.

Fiske	39.2	McCleary	4.5
Boynton	13.4	Bryce	4.5
Ashley	11.3	Schwinn and Stevenson.....	4.5
Jones and Sanford.....	9.2	Lansing and Jones.....	2.2
Andrews	4.5	Thorpe	2.2
Hinsdale	4.5		

g. POLITICAL ECONOMY.

Bullock	63.6	McLaughlin	18.2
Ely	18.2		

3. SCIENCE.

*a. PHYSICS.**Text.*

Carhart and Chute.....	79.3	Millikan and Gale.....	4.6
Hoadley	6.9	Avery	2.3
Gage	4.6	Mann and Twiss.....	2.3

Laboratory Manual.

Chute	50.	S. H. S. Outline.....	8.3
U. of W. Outline.....	25.	Deason	4.2
W. S. C. Outline.....	12.5		

*b. CHEMISTRY.**Text.*

Newell	32.	Linebarger	5.2
Hessler and Smith.....	21.	Remsen	5.2
Clark and Denny.....	21.	Watson	5.2
Williams	5.2	Lectures	5.2

Laboratory Manual.

Newell	32.	Clark and Denny.....	15.6
Hessler and Smith.....	21.		

c. BOTANY.

Bergen	74.5	Andrews	2.8
Coulter	11.4	Atkinson	2.8
Bailey	5.7	Leavitt	2.8

d. ZOOLOGY.

Jordan, Kellogg and Heath.....	43.	Burnette	14.2
Linville and Kelly.....	28.6	Kellogg	14.2

c. PHYSIOLOGY.

Peabody	31.4	Macy	6.2
Overton	25.0	Jegi	6.2
Martin	12.5	Blaisdell	6.2
Foster and Shores.....	12.5		

f. PHYSIOGRAPHY.

Tarr	75.6	Houston	4.9
Davis	12.2	Gilbert and Brigham.....	2.4
Dryer	4.9		

g. GEOLOGY.

Tarr	100.
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4. MATHEMATICS.

a and b. ALGEBRA.

Wells	39.0	White	23.4
Wentworth	25.4	Milne	12.2

c and d. GEOMETRY.

Wells	50.	Wentworth	9.1
Shutts	36.3	Wentworth's Solid.....	4.6

e. TRIGONOMETRY.

Wentworth	66.6	Wells	33.3
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f. COMMERCIAL ARITHMETIC.

More	33.3	Goodyear and Whigham.....	25.
Powers and Lyons.....	25.	Marshall	16.7

g. BOOKKEEPING.

Modern Illustrative.....	31.	Powers and Lyons.....	15.4
Ellis Tablet System.....	23.	Marshall and Goodyear.....	7.6
Williams and Rogers.....	23.		

5. FOREIGN LANGUAGES.

a. LATIN.

(1) First Year.

Collar and Daniell.....	76.4	Bennett	4.3
Tuell and Fowler.....	10.7	Scudder	2.1
Gunnison and Harley	6.5		

(2) Second Year.

Greenough, D'Ooge and Daniell.....	40.4	Bennett Caesar	4.1
Allen and Greenough Caesar.....	36.9	Composition	
Harkness and Forbes Caesar.....	10.4	Jones	12.3
Miller and Beeson Caesar.....	4.1	Allen and Greenough.....	8.2
Kelsey Caesar	4.1	Harkness Grammar	6.2

(3) Third Year.

<i>Cicero</i>		Composition	
Allen and Greenough.....	65.7	D'Ooge	27.6
Bennett	17.2	Jones	10.3
Harper and Gallup.....	10.3	Bennett	6.8
Kelsey	3.4	Allen and Greenough.....	6.8
Tinstalls	3.4		

(4) Fourth Year.

<i>Virgil</i>		Allen and Greenough Ovid.....	11.5
Greenough and Kittredge.....	53.9	Composition	
Bennett	15.4	D'Ooge	30.8
Harper and Miller.....	11.5	Pearson	15.4
Knapp	7.7		

b. GERMAN.

(1) Grammar.

Spanhoofd's Lehrbuch.....	39.6	Keller	6.2
Joynes-Meissner	39.6	Whitney	2.1
Vos	8.4	Otis	2.1
Thomas	6.2		

(2) Reader.

Joynes	14.5	Carruth	8.4
Lange	8.4		

(3) Conversation.

Wesselhoofd	10.5	Bronson	6.2
Collar	8.4		

(4) Classics.

Wilhelm Tell	62.5	Das Kalte Herz.....	5.
Imensee	50.	Irrfahrten	5.
Gluck Auf	30.	Der Taucher	5.
Hoher als die Kirche.....	15.	Kleine Geschichten	2.5
Marchen und Erzählungen.....	12.5	Aus Herz und Welt.....	2.5
L'Arrabiata	12.5	Mina Von Barnhelm.....	2.5
Die Nefte als Onkel.....	7.5	Der Schwiegersohn	2.5
Germelshausen	7.5	Der Spaziergang	2.5
Marie Stuart	7.5	Hermann und Dorothea.....	2.5
Jungfrau von Orleans.....	7.5	Das Marchen	2.5
Aus deutschen Landen.....	5.		

c. FRENCH.

Fraser and Squair Grammar.....	100.	Seiglier	12.5
La Belle Nivernaise.....	50.	Worman's First French Book...	12.5
Saus Famille	25.	Caulfield's Lyrics	12.5
Les Miserables	25.	Muzzarelli Academic French....	12.5
La Fontaine Fables.....	25.		

d. SPANISH.

Edgren's Grammar	75.	El Haz de Lena.....	25.
Garner's Grammar	25.	Cuentos Castellanos	25.
Worman's First Book	50.	Ramsey and Lewis Composition..	25.
Marion and des Gerennes.....	50.		

e. GREEK.

White	100.	Goodwin and White.....	50.
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IV. NUMBER OF SUBJECTS TAUGHT.

Number subjects, 14;	number schools, 3	Number subjects, 24;	number schools, 2
" " 16;	" " 2	" " 25;	" " 4
" " 17;	" " 2	" " 26;	" " 4
" " 18;	" " 2	" " 28;	" " 1
" " 19;	" " 4	" " 30;	" " 1
" " 20;	" " 5	" " 33;	" " 1
" " 21;	" " 8	" " 34;	" " 1
" " 22;	" " 7	" " 36;	" " 1
" " 23;	" " 5	" " 41;	" " 2

V. TOTAL TIME IN HOURS OF 60 MINUTES.

(See note.)

SUBJECTS.	Hours.	Per cent. of total number of hours.	Corre- sponding per cent. for Illinois.
ENGLISH.....	27,786	17.1	.....
Composition.....	6,993	.....	.....
Rhetoric.....	6,993	.....	.....
Literature.....	6,807	.....	.....
Classics.....	6,993	.....	.....
HISTORY.....	22,054	13.6	14.
General.....	1,775	.....	.....
Ancient.....	4,493	.....	.....
Medieval and Modern.....	3,943	.....	.....
English.....	3,793	.....	.....
United States.....	3,625	.....	.....
Civics.....	3,375	.....	.....
Political Economy.....	1,050	.....	.....
SCIENCE.....	34,584	21.3	23.5
Physics.....	9,828	.....	.....
Chemistry.....	4,273	.....	.....
Botany.....	9,464	.....	.....
Zoology.....	2,205	.....	.....
Physiology.....	1,518	.....	.....
Physiography.....	6,684	.....	.....
Astronomy.....	134	.....	.....
Geology.....	478	.....	.....
MATHEMATICS.....	25,893	15.9	16.3
Elementary Algebra.....	7,410	.....	.....
Advanced Algebra.....	3,712	.....	.....
Plane Geometry.....	6,993	.....	.....
Solid Geometry.....	3,563	.....	.....
Trigonometry.....	466	.....	.....
Commercial Arithmetic.....	1,148	.....	.....
Bookkeeping.....	2,601	.....	.....
FOREIGN LANGUAGES.....	39,414	23.7	25.4
Latin.....	22,835	.....	.....
German.....	12,001	.....	.....
French.....	2,374	.....	.....
Spanish.....	1,177	.....	.....
Greek.....	1,027	.....	.....
MISCELLANEOUS.....	12,225	8.4	2.7
Drawing.....	3,425	.....	.....
Manual Training.....	4,850	.....	.....
Domestic Science.....	.....	.....	.....
*Painting.....	450	.....	.....
*Music.....	750	.....	.....
*Physical Culture.....	750	.....	.....
*Debate and Oratory.....	500	.....	.....
*Stenography and Typewriting.....	500	.....	.....
*Commercial Law.....	500	.....	.....
*Commercial Geography.....	500	.....	.....

* Data incomplete.

VI. COMPARISON OF THE GROUPS.

(See note.)

SUBJECTS.	Number Teachers.	Number Students.	Number Hours.
English.....	95	8,790	27,786
History.....	54	5,212	23,054
Science.....	80	5,331	34,584
Mathematics.....	83	8,578	25,893
Foreign Language.....	96	6,729	39,414
Miscellaneous.....	58	*2,315	12,225

* Does not include those taking music, physical culture and debating, since the data received relating to these were incomplete.

NOTE.—It should be remembered that in reckoning number of *hours* no account can be taken of the fact that in the larger schools the same subject is often taught to two or more sections.

VII. COURSES OF STUDY OFFERED.

<i>Courses of study.</i>	<i>No. schools.</i>	<i>Courses of study.</i>	<i>No. schools.</i>
Classical.....	18	Classical	{ 1
Classical	{ 14	Modern Language	
Scientific		Classical	{ 1
Classical	{ 10	Scientific	
Scientific		Modern Language	{ 1
Literary		Classical	
Commercial	{ 4	Latin	
Classical		Scientific	{ 1
Scientific		English	
English	{ 2	Classical	{ 1
Classical		Modern Language	
Scientific		Commercial	{ 1
Commercial	{ *2	Manual Training	
Classical		Classical	{ 1
Latin		Scientific	
Modern Language		Literary	
Scientific		History	
History		Manual Training	{ 1
Commercial			
Manual Training			
Art			

* Washington and Lincoln High Schools, Seattle.

C. TIME DATA.

I. LENGTH OF SCHOOL YEAR.

Number of weeks, 35;	Number of schools, 1;	Per cent. of schools, 1.7
“ “ 36;	“ “ 35;	“ “ 63.4
“ “ 37;	“ “ 1;	“ “ 1.7
“ “ 38;	“ “ 8;	“ “ 14
“ “ 40;	“ “ 11;	“ “ 19.2

II. LENGTH OF PERIOD.

a. RECITATION.

Number of minutes, 25;	Number of schools, 1;	Per cent. of schools, 1.8
“ “ 30;	“ “ 1;	“ “ 1.8
“ “ 35;	“ “ 1;	“ “ 1.8
“ “ 40 and 30;	“ “ 2;	“ “ 3.6
“ “ 40;	“ “ 12;	“ “ 21.6
“ “ 40 and 45;	“ “ 8;	“ “ 14.4
“ “ 45;	“ “ 29;	“ “ 53.2
“ “ 47;	“ “ 1;	“ “ 1.8

b. LABORATORY.

Number of minutes, 40;	Number of schools, 4;	Per cent. of schools, 7.2
“ “ 45;	“ “ 5;	“ “ 9.
“ “ 40 and 45;	“ “ 3;	“ “ 5.4
“ “ 45 and 90;	“ “ 3;	“ “ 5.4
“ “ 60;	“ “ 3;	“ “ 5.4
“ “ 70 and 95;	“ “ 1;	“ “ 1.8
“ “ 80;	“ “ 9;	“ “ 16.3
“ “ 80 and 90;	“ “ 4;	“ “ 7.2
“ “ 90;	“ “ 22;	“ “ 40.5
“ “ 94;	“ “ 1;	“ “ 1.8

III. PERIODS PER WEEK.

Number periods, 4;	Number of schools, 2;	Per cent. of schools, 3.7
“ “ 5;	“ “ 53;	“ “ 96.3

IV. *UNITS REQUIRED FOR GRADUATION.

Number units, 15;	Number of schools, 21;	Per cent. of schools, 38.2
“ “ 16;	“ “ 34;	“ “ 61.8

*The question on this point included the following definition for *unit*:

“To count as a unit a subject must be taught at least four times a week in periods not less than 45 minutes, for a school year of not less than 36 weeks.”

D. STUDENTS.

I. ENROLLMENT.

a. ENROLLMENT BY YEARS.

YEAR.	Boys.	Girls.	Total.
I.	2,029	2,480	4,509
II.	1,114	1,520	2,634
III.	681	889	1,570
IV.	477	674	1,151
Total reported	4,301	5,563	9,864

b. PERCENTAGE OF ENROLLMENT BY YEARS IN CITIES OF VARIOUS SIZES.

YEAR.	Cities over 50,000	Cities over 8,000	Cities under 8,000	State.	United States.
I.	46.3	47.2	42.2	45.2	43.
II.	26.2	26.6	31.6	28.1	26.
III.	15.4	15.3	14.	14.9	18.
IV.	12.1	10.9	12.2	11.8	13.

c. PERCENT OF BOYS AND GIRLS ENROLLED.

	Cities over 50,000	Cities over 8,000	Cities under 8,000	State.	United States.
Boys.	44.1	42.2	40.5	42.3	42.5
Girls.	55.9	57.8	59.5	57.7	57.5

II. AVERAGE AGE.

YEAR.	Boys.	Girls.
I.	15.50 years..	15.00 years
II.	16.33 years..	16.00 years
III.	17.00 years..	16.75 years
IV.	18.25 years..	17.75 years
Total	16.25 years..	15.83 years

III. ENROLLED FROM OUTSIDE HIGH SCHOOL DISTRICT.

Boys, 334; Girls, 401; Total, 735.

IV. *WHOLLY OR IN PART SELF-SUPPORTING.

Boys, 298; Girls, 125; Total, 423.

* Does not include Seattle, Spokane or Tacoma.

V. NUMBER OF STUDENTS IN EACH SUBJECT.

	<i>Number.</i>		<i>Per cent of total in School.</i>		<i>*Num- ber.</i>	<i>Per ct. of total in school.</i>
	Boys.	Girls.	Boys.	Girls.		
ENGLISH.....	2,079	2,952	79.1	87.7	8,790	90.1
I.....	1,031	1,280	39.8	38.	3,640	37.4
II.....	373	816	14.4	24.2	2,274	23.3
III.....	386	503	14.5	15.	1,720	17.6
IV.....	289	353	10.4	10.5	1,156	11.8
HISTORY.....	1,495	1,956	58.6	57.7	5,212	53.1
General.....	52	96	2.	2.8	148	1.5
Ancient.....	676	759	26.	22.5	2,251	23.1
Medieval and Modern.....	165	246	6.8	7.3	645	6.5
English.....	149	241	5.8	7.1	468	4.8
United States.....	228	317	9.4	9.3	786	8.1
Civics.....	182	230	7.	6.8	697	7.1
Political Economy.....	43	67	1.6	1.9	217	2.
SCIENCE.....	1,828	2,119	70.4	62.8	5,331	54.3
Physics.....	333	415	12.8	12.3	1,238	12.7
Chemistry.....	151	96	5.8	2.8	384	3.9
Botany.....	263	464	10.1	13.8	848	8.7
Zoology.....	48	58	1.8	1.7	193	1.9
Physiology.....	177	183	6.9	5.4	429	4.1
Physiography.....	838	886	32.3	26.3	2,172	22.3
Astronomy.....					9	.1
Geology.....	18	17	.7	.5	58	.6
MATHEMATICS.....	2,826	3,342	108.4	99.	8,578	87.8
Elementary Algebra.....	1,256	1,548	48.5	46.	3,906	40.1
Advanced Algebra.....	204	261	7.8	7.7	618	6.3
Plane Geometry.....	730	885	28.1	26.3	2,435	25.
Solid Geometry.....	182	171	7.	5	445	4.5
Trigonometry.....	53	21	2.	.6	115	1.1
Commercial Arithmetic.....	124	141	4.8	4.1	355	3.6
Bookkeeping.....	277	315	10.2	9.3	704	7.2
FOREIGN LANGUAGE.....	1,572	2,556	62.3	76.8	6,729	68.6
LATIN.....	954	1,583	36.6	47.7	3,538	36
I.....	555	873	21.4	26.1	1,895	19.4
II.....	248	429	9.5	12.9	948	9.7
III.....	94	193	3.6	6.	440	4.5
IV.....	57	88	2.1	2.7	254	2.4
GERMAN.....	507	747	19.9	22.2	2,106	21.6
I.....	356	493	14.3	14.3	1,335	13.7
II.....	104	181	3.7	5.4	569	5.8
III.....	27	45	1.	1.7	154	1.6
IV.....	20	28	.9	.8	48	.5
FRENCH.....	89	209	4.9	6.1	934	9.4
I.....	61	136	3.7	4.	624	6.3
II.....	28	69	1.2	1.9	290	2.9
III.....		4		.2	20	.2
SPANISH.....	21	12	.9	.6	141	1.5
GREEK.....	1	5	.04	.2	11	.1
MISCELLANEOUS:						
Manual Training.....	316	299	12.2	8.9		11.3
Domestic Science.....						
Drawing.....	235	43	9.4	1.6		5.
Painting.....	6	204	.2	6.		4.7

*This column includes the totals from Spokane and Washington (Seattle) high schools, besides the totals of the first and second columns.

VI. OCCUPATION OF PARENTS OR GUARDIANS.

OCCUPATION	Number			Percentage of total reporting			Percentage of each occupation	
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls
1. EMPLOYERS AND MERCHANTS—								
<i>a.</i> Merchant.....	352	408	760	9.8	9.1	9.45	46.4	53.6
<i>b.</i> Real Estate Dealer.....	196	234	430	5.1	5.2	5.15	45.6	54.4
<i>c.</i> Contractor.....	125	211	336	3.5	4.6	4.05	37.2	62.8
<i>d.</i> Lumber Business.....	121	157	278	3.4	3.4	3.40	43.5	56.5
<i>e.</i> Banker, Broker or Retired.....	115	119	234	3.2	2.7	2.95	49.2	50.8
<i>f.</i> Manufacturer.....	46	45	91	1.3	1.1	1.20	50.6	49.4
2. PROFESSIONS—								
<i>a.</i> Minister.....	70	69	139	1.9	1.5	1.70	50.4	49.6
<i>b.</i> Physician or Dentist.....	58	58	116	1.6	1.3	1.45	50.0	50.0
<i>c.</i> Teacher.....	52	42	94	1.4	.9	1.15	55.4	44.6
<i>d.</i> Attorney.....	86	85	171	2.4	1.9	2.15	50.3	49.7
3. SALARIED EMPLOYEES—								
<i>a.</i> Agent.....	69	69	138	1.8	1.5	1.65	50.0	50.0
<i>b.</i> Bookkeeper or Stenographer....	53	64	117	1.5	1.4	1.45	45.3	54.7
<i>c.</i> Foreman or Manager.....	99	163	262	2.8	3.6	3.20	37.8	62.2
<i>d.</i> Public Official.....	116	126	242	3.2	2.8	3.00	48.0	52.0
<i>e.</i> Newspaper Man.....	13	19	32	.3	.4	.35	40.7	59.3
<i>f.</i> Other Salaried Employees.....	75	111	186	2.2	2.4	2.30	40.4	59.6
<i>g.</i> Engineer.....	75	108	183	2.1	2.3	2.20	41.0	59.0
<i>h.</i> Clerk or Salesman.....	90	117	207	2.5	2.6	2.55	43.5	56.5
4. MANUAL LABORERS—								
<i>a.</i> Trades not Classified.....	197	264	461	5.5	5.9	5.70	42.6	57.4
<i>b.</i> Building Trades.....	184	269	453	5.2	5.9	5.55	40.7	59.3
<i>c.</i> Common Laborer.....	122	172	294	3.4	3.8	3.60	41.5	58.5
<i>d.</i> Mill Worker.....	86	105	191	2.4	2.3	2.35	45.3	54.7
<i>e.</i> Machinist.....	62	72	134	1.7	1.6	1.65	46.3	53.7
<i>f.</i> Steam R. R. Employee.....	60	69	129	1.6	1.5	1.55	46.6	53.4
<i>g.</i> Teamsters or Expressman.....	40	77	117	1.1	1.7	1.40	34.2	65.8
<i>h.</i> Printer.....	31	25	56	.9	.5	.70	55.4	44.6
<i>i.</i> Street R. R. Employee.....	23	31	54	.6	.7	.65	42.6	57.4
<i>j.</i> Barber.....	20	23	43	.5	.5	.5	46.6	53.4
5. Farmer.....	521	620	1,141	14.4	13.8	14.1	45.7	54.3
6. Women.....	195	259	454	5.5	5.7	5.6	43.0	57.0
7. *No Occupation.....	257	335	592	7.2	7.4	7.3	43.5	56.5
TOTAL REPORTED.....	3,609	4,526	8,135	100	100	100	44.4	55.6
SUMMARY —								
1. Manual Laborer.....	920	1,246	2,166	25.5	27.3	26.40	42.5	57.5
2. Employer or Merchant.....	955	1,174	2,129	26.3	26.1	26.20	44.9	55.1
3. Salaried Employee.....	590	777	1,367	14.7	14.1	14.40	43.2	56.8
4. Professional.....	266	254	520	6.4	5.6	6.00	51.2	48.8
5. Farmer.....	521	620	1,141	14.4	13.8	14.10	45.7	54.3
6. Women.....	195	259	454	5.5	5.7	5.60	43.0	57.0
7. *No Occupation.....	257	335	592	7.2	7.4	7.30	43.5	56.5

*There is reason to believe that most of these should be classed as manual laborers.

VII. TUITION FEE CHARGED STUDENTS FROM OUTSIDE DISTRICT

AMOUNT.	Number Schools.	Per Ct. of Schools.
No charge.....	30	73.6
\$4.50 per year.....	1	2.4
\$13.50 per year.....	3	7.2
\$18.00 per year.....	1	2.4
\$20.00 per year.....	1	2.4
\$22.50 per year.....	1	2.4
\$25.00 per year.....	1	2.4
\$35.00 per year.....	3	7.2
Total reported.....	41	

E. TEACHERS.

I. NUMBER.

	Number.	Per Cent.	Per Cent. in U. S.
Male.....	225	46.1	47.3
Female.....	263	53.9	52.7
Total.....	488	100.	100.

II. PREPARATION.

a. GRADUATION FROM HIGHER INSTITUTIONS.

1. College Graduates.....	357
2. Graduates of both College and Normal School.....	44
3. Normal Graduates.....	48
4. Business College Graduates.....	7
5. Teachers having had College or Normal training, but not Graduates.....	32
Total reported.....	488

b. DIPLOMAS AND DEGREES.

DEGREES.	Number Teacher.	Higher Degrees.	Number Teacher.
1. A. B.....	217	1. A. M.	53
2. B. S.....	49	2. Ph. M.....	4
3. Ph. B.....	35	3. M. S.....	1
4. B. L.....	12	4. M. Di.....	6
5. B. Di.....	2	5. M. Pd.....	1
6. B. M.....	1	6. M. Accts.....	1
7. L. L. B.....	6	7. Ph. D.....	10
8. B. Pd.....	1		
9. B. O.....	2		

III. INSTITUTIONS FROM WHICH DEGREES WERE OBTAINED.

University of Washington.....	65
University of Michigan.....	24
University of Minnesota.....	21
University of Chicago.....	21
Washington State College.....	18
University of Wisconsin.....	18
Iowa State College.....	13
University of Illinois.....	14
University of Iowa.....	9
University of Nebraska.....	9
Cornell College (Ia.).....	8
Whitman College.....	8
Carleton College (Minn.).....	8
Northwestern University.....	7
Harvard University.....	7
University of California.....	6
Indiana University.....	5
Brown University.....	5
Oberlin College.....	5
Leland Stanford, Jr., University.....	5
University of Oregon.....	5
University of Kansas.....	5
Ohio Wesleyan University.....	4
Princeton University.....	4
Ohio Northern University.....	4
Cornell University.....	4
Drake University (Ia.).....	3
University of Missouri.....	3
University of Cincinnati.....	3
University of South Dakota.....	3
University of Puget Sound.....	3
University of Idaho.....	3
Simpson College (Ia.).....	3
Dickinson College.....	3
Valparaiso University.....	3
University of Wooster (O.).....	2
Ohio State University.....	2
Hamline University (Minn.).....	2
Columbia University.....	2
Purdue University (Ind.).....	2
Colorado College.....	2
Monmouth College (Ill.).....	2
Dartmouth College.....	2
Whitworth College.....	2
Kentucky Wesleyan University.....	1
Pacific University (Ore.).....	1
Syracuse University.....	1
Yale University.....	1
Connecticut Wesleyan University.....	1
Lebanon University (O.).....	1
Victoria University (Can.).....	1
Southern Normal University.....	1
Oxford University (Eng.).....	1
Queens University (Can.).....	1
Salem College (W. Va.).....	1
Fremont College (Neb.).....	1

Hartsville College.....	1
Fairmount College (Kan.).....	1
Oregon Agricultural College.....	1
Olivet College (Mich.).....	1
Otterbein College (O.).....	1
Theil College.	1
Colorado College.....	1
Kansas Agricultural College.....	1
Hiwassee College (Tenn.).....	1
N.-W. Missouri College.....	1
Macalester College (Minn.)....	1
Michigan Agricultural College.....	1
Middlebury College (Vt.)	1
Borden College (Md.)	1
Rio Grand College (O.)	1
Synodical College (Mo.).....	1
Westminster College (Pa.).....	1
Hillsdale College (Mich.)	1
Albion College (Mich.).....	1
South Dakota Agricultural College.....	1
Bates College (Me.).....	1
College of St. Hilare (Paris).....	1
University of Paris.....	1
University of Nashville (Tenn.).....	1
University of Tennessee.....	1
University of Pennsylvania.....	1
University of Rochester	1
University of North Dakota	1
University of Ottawa (Can.)....	1
Johns Hopkins University.....	1
New York University.....	1
Illinois Wesleyan University.....	1
Nebraska Wesleyan University	1
Dennison University (O.).....	1
Franklin and Marshall College....	1
Wabash College (Ind.).....	1
Mt. Holyoke College (Mass.).....	1
Lawrence College (Wis.)	1
Hedding College (Ill.).....	1
Hamilton College.....	1

Total graduates reported 401

Graduates of State Institutions	229
Graduates of Private Non-Sectarian Schools.....	96
Graduates of Sectarian Schools	76

GEOGRAPHICAL DISTRIBUTION OF INSTITUTIONS —

Washington	96
Oregon and California.....	18
Rocky Mountain States.....	5
Middle Western States.....	225
Eastern States.....	44
Southern States.....	7
Foreign Countries.....	6

IV. TOTAL EXPERIENCE.

YEARS	Number Teachers	Per Ct. of total	YEARS	Number Teachers	Per Ct. of total
Less than one year.....	27	5.5	Sixteen years.....	9	1.8
One year.....	46	9.4	Seventeen years.....	9	1.8
Two years.....	32	6.7	Eighteen years.....	4	.8
Three years.....	44	9.0	Nineteen years.....	3	.6
Four years.....	40	8.2	Twenty years.....	4	.8
Five years.....	38	7.8	Twenty-two years.....	5	1.0
Six years.....	38	7.8	Twenty-three years.....	3	.6
Seven years.....	42	8.6	Twenty-four years.....	1	.2
Eight years.....	19	3.9	Twenty-five years.....	2	.4
Nine years.....	19	3.9	Twenty-seven years.....	1	.2
Ten years.....	27	5.5	Twenty-eight years.....	2	.4
Eleven years.....	20	4.1	Thirty-one years.....	1	.2
Twelve years.....	19	3.9	Thirty-two years.....	1	.2
Thirteen years.....	12	2.4	Forty-one years.....	1	.2
Fourteen years.....	11	2.2			
Fifteen years.....	6	1.2	Total reported.....	486	

V. TENURE IN PRESENT POSITION.

YEARS	Number Teachers	Per Ct. of total	YEARS	Number Teachers	Per Ct. of total
Less than one year.....	183	49.1	Nine years.....	2	.5
One year.....	80	21.5	Ten years.....	1	.2
Two years.....	43	11.5	Twelve years.....	2	.5
Three years.....	26	6.9	Thirteen years.....	1	.2
Four years.....	14	3.7	Sixteen years.....	2	.5
Five years.....	10	2.6	Seventeen years.....	1	.2
Six years.....	3	.8			
Seven years.....	2	.5	Total reported.....	372	
Eight years.....	2	.5			

VI. DAILY RECITATIONS PER TEACHER.

NUMBER RECITATIONS	Number Teachers	Per Ct. of total	NUMBER RECITATIONS	Number Teachers	Per Ct. of total
One recitation.....	5	1.0	Seven recitations.....	14	2.9
Two recitations.....	15	3.1	Eight recitations.....	1	.2
Three recitations.....	12	2.5	Twelve recitations.....	4	.8
Four recitations.....	55	11.5			
Five recitations.....	217	45.5	Total reported.....	477	
Six recitations.....	154	32.5			

VII. NUMBER OF TEACHERS EMPLOYED PER SCHOOL.

NUMBER OF TEACHERS	Number Schools	Per Ct. Schools	NUMBER OF TEACHERS	Number Schools	Per Ct. Schools
One teacher.....	1	1.8	Ten teachers.....	1	1.8
Two teachers.....	3	5.4	Thirteen teachers.....	2	3.6
Three teachers.....	12	22.2	Fifteen teachers.....	1	1.8
Three and one-half tchr's	4	7.2	Twenty-four teachers...	1	1.8
Four teachers.....	9	16.4	Thirty-nine teachers....	1	1.8
Four and one-half tchr's.	2	3.6	Forty-nine teachers....	1	1.8
Five teachers.....	9	16.4	Fifty-eight teachers....	1	1.8
Five and one-half teach's	2	3.6	Seventy-three teachers..	1	1.8
Six and one half teachers	1	1.8			
Eight teachers.....	3	5.4	Total schools reported	55	

VIII. COMBINATIONS OF SUBJECTS TAUGHT.

<i>Subject.</i>	<i>Number of Teachers.</i>
English.....	72
Mathematics—Algebra, 11; Geometry, 8; Alge. and Geom., 27.....	46
History.....	34
Latin.....	28
Latin and German.....	16
Manual Training.....	14
Domestic Science.....	12
German.....	12
English and German.....	12
Physics.....	10
Bookkeeping, Commercial Law and Commercial Arithmetic.....	10
Drawing.....	8
Latin and Mathematics.....	8
History and Mathematics.....	8
Latin and English.....	7
Stenography and Typewriting.....	7
French.....	6
Physiography.....	6
History and English.....	6
French and Spanish.....	5
Mathematics and Physics.....	5
Physics and Chemistry.....	5
Physics, Botany and Physiography.....	5
Botany.....	4
Chemistry.....	4
History and Latin.....	4
History and German.....	4
Physics, Botany, Zoology and Physiography.....	4
Mathematics and English.....	3
Botany and Physiography.....	3
Latin, German and English.....	3
Physics, Botany, Algebra and Physiography.....	3
Physics, Botany, Chemistry and Physiography.....	3
Bookkeeping, Commercial Law, Commercial Arithmetic and Stenography.....	3
Painting.....	2
French and German.....	2
English and Botany.....	2
History and Physiography.....	2
Algebra and Gymnasium.....	2
Latin, German and History.....	2
English, German and French.....	2
English, German and Physiography.....	2
English, Music and Botany.....	2
English, Mathematics and Physiography.....	2
Physiography, Geology and Astronomy.....	2
Physiography, Physics and History.....	2
Physiography, Botany and History.....	2
Mathematics, Chemistry and Physics.....	2
Physics, Botany, Chemistry and Bookkeeping.....	2
Zoology.....	1
Bookkeeping.....	1
Latin and Spanish.....	1
Latin and French.....	1
Latin and Physics.....	1
Latin and Physiography.....	1
Mathematics and German.....	1

Mathematics and Botany	1
Mathematics and Bookkeeping	1
Algebra and Physiography	1
Algebra and Debate	1
Geometry and Athletics	1
History and Chemistry	1
History and Physics	1
Music and Drawing	1
Music and Elocution	1
English and Domestic Science	1
Physics and Physiography	1
Zoology and Physiography	1
Economics and Civics	1
German and Sewing	1
Oratory and Physical Culture	1
Manual Training and Drawing	1
Algebra, History and English	1
Algebra, Botany and Latin	1
Algebra, History and German	1
Physics, Botany and Latin	1
Physics, Chemistry and Physiography	1
Physics, Chemistry and Bookkeeping	1
Physics, Botany and Mathematics	1
Physics, Mathematics and Physiography	1
Physics, Mathematics and Drawing	1
Mathematics, Bookkeeping and Latin	1
Mathematics, Bookkeeping and History	1
Mathematics, Bookkeeping and Stenography	1
Mathematics, Commercial Law and Athletics	1
Latin, Civics and English	1
Latin, Oratory and Music	1
Latin, History and Music	1
Latin, History and English	1
History, Economics and Drawing	1
Botany, Zoology and Physiography	1
Physics, Botany, English and History	1
Physics, Botany, Physiography and History	1
Physics, Chemistry, Physiography and Zoology	1
Latin, Physiology, Physiography and History	1
Botany, Bookkeeping, Physiography and History	1
Geometry, German, Physiography and History	1
Mathematics, Zoology, Physiography and History	1
Mathematics, Astronomy, Geology and Botany	1
Mathematics, Bookkeeping, Commercial Law and English	1
Mathematics, Physics, Physiography and Geology	1
Latin, Geometry, English and History	1
Algebra, Physiology, Physics, English and Physiography	1
Mathematics, Latin, Physics, History and Physiography	1
Geometry, History, Physics, Botany and Physiography	1
Mathematics, Zoology, Physics, Botany, Physiology and Physiography	1

Total reported..... 467

	<i>Number.</i>	<i>Per Cent.</i>
Teachers having one subject	260	55.6
Teachers having two subjects	122	26.1
Teachers having three subjects	55	12.2
Teachers having four subjects	26	5.3
Teachers having five subjects	3	.6
Teachers having six subjects	1	.2

Summary of Combinations.

	<i>Number Teachers.</i>
English and Foreign Language	46
Science	27
Language and History	18
Mathematics and Science	17
Mathematics and Language	14
Mathematics and History	9
History and Science	8
Language and Science	8
Mathematics, Language and Science	5
Mathematics, Language and History	3
Language, History and Science	2
Mathematics, Language, History and Science	2
Mathematics, History and Science	1

CONCLUSION.

These statistics in general speak for themselves and individual high schools may judge from them to some extent how their work compares with the general standard of the state, and where their strength and weaknesses lie.

We have therefore refrained from extended comment, and wish to mention only a few points of special interest and import.

Many high schools report that they have no reliable data concerning the total number of graduates. It is very unfortunate that such a roll of honor should be lost.

THE CURRICULUM.

In studying the curriculum the weakness of natural science is very striking, all departments of this work having but 80 teachers and 5,331 students as compared with foreign languages having 96 teachers and 6,721 students.

The high schools of this state do not compare favorably with those of Illinois in the departments of natural science, but are strong in English, mathematics and German.

It may be worth mentioning that but 54 teachers are engaged in teaching history to only 5,212 students.

The commercial course is fast rising in prominence. Fifteen schools having already adopted such a course with twenty-one teachers devoting their whole time to commercial subjects and ten giving part time.

Manual training and domestic science are also securing recognition, as there are twenty-six teachers employed in the high schools teaching these subjects.

The State of Washington is no exception in that the teaching of physical culture and music is neglected in the secondary schools, but the cause may be found to some extent in our higher educational institutions, as Prof. Leonard B. McWhood* of Columbia University states, in an article in the Literary Digest of April 18, 1908, that "there are only nineteen colleges in the United States which grant entrance credits for music, and twelve of these are in New England. The majority of these have made such provision within three years." But the higher institutions are rapidly adding these two subjects to their curriculum and are even making physical culture compulsory, so that perhaps this movement may reach the high schools and a better showing in these subjects be made within a few years.

STUDENTS.

One of the serious problems in connection with the high school in Washington as well as elsewhere is to increase the percentage of those

* Prof. McWhood was appointed by the Eastern Educational Music Conference to act as chairman of a committee to awaken interest in music in American colleges.

enrolled in the last two years. In the United States at large, forty-three per cent. of the high school students are in the first year and but thirteen per cent. in the fourth year. The percentage in this state is seen to be below even this average. This is worthy the careful attention of the high school authorities.

It is interesting to note that such a large per cent. of the high school students are the children of manual laborers and farmers, and also that so large a number of students are either wholly or in part self-supporting. The Board of Directors are doing what they can to encourage attendance of the student that has passed the eighth grade, as seventy-three per cent. of the schools reporting admit students from outside the district without tuition.

The large number of real estate dealers, as parents, are principally located in the large cities, and may be abnormal, although we have no similar statistics of other states with which to make comparison.

TEACHERS.

The preparation of the teachers in the secondary schools of this state is worthy of notice. Four hundred and one teachers or eighty-two per cent. are college graduates, forty-four of these being the graduates of normals as well, and seventy-six have received higher degrees. Forty-eight others hold diplomas from normal schools, and of the thirty-two, who are not graduates of any institution above the high school, every one has had either college or normal training. While the colleges and normal schools represented are of all grades, it is yet significant that those in control regard professional training for the secondary school as necessary.

The total experience of the teachers shows a condition about normal, but the report on the "tenure in the present location" is not so favorable. Forty-nine per cent. of the teachers reported are teaching in their present location this year for the first time, and twenty-one per cent. are teaching their second year, leaving less than thirty per cent. who have served two years or over in their present positions.

There are other features of this report which might be suggested, such as the predominance of women as teachers, but the many problems of the high schools are being recognized and the authorities are realizing their opportunity and responsibility. Thus the secondary education of the next generation will very likely be enriched by the new ideals of a physically and intellectually developed individual imbued with a sense of social relationship and the desire for service.

High School Bulletin No. 4.

Physics.

ISSUED BY THE
DEPARTMENT OF EDUCATION

HENRY B. DEWEY,
Superintendent of Public Instruction

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HIGH SCHOOL BULLETIN NO. 4

FOR THE

High Schools of Washington

PHYSICS

By Prof. H. V. Carpenter, State College
Pullman, Washington

ISSUED BY THE
DEPARTMENT OF EDUCATION

HENRY B. DEWEY
Superintendent of Public Instruction

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D. OF D.
AUG 27 1910

THE PHYSICS COURSE OF THE MODERN HIGH SCHOOL.

The course in physics as given by the high schools of the United States has been the subject of much discussion and argument. One of the few points upon which there is quite satisfactory agreement is that the course should consist of one full year's work. It may be added that few schools give more than this and few colleges accept less when offered for entrance. This condition has led to the formulation of the following quite satisfactory definition of the physics unit.

1. The unit in physics consists of at least one hundred and eighty periods of forty-five minutes each of assigned work. Two periods of laboratory work count as one of assigned work.

2. The work consists of three closely related parts; namely, class work, lecture-demonstration work, and laboratory work. At least one-fourth of the time shall be devoted to laboratory work.

3. It is very essential that double periods be arranged for the laboratory work.

4. The class work includes the study of at least one standard text.

5. In the laboratory, each student shall perform at least thirty individual experiments, and keep a careful note-book record of them. Twenty of these experiments must be quantitative; each of these must illustrate an important physical principle, and no two must illustrate the same principle.

6. In the class work the student must be drilled to understand the use of the general principles (named in a required syllabus, see *School Science and Mathematics*, June '08, p. 523). He must be able to apply these principles intelligently to the solution of simple, practical, concrete problems.

7. Examinations will be framed to test the student's understanding of and ability to use the general principles in the required syllabus, as quoted in 6.

8. The teacher is not expected to follow the order of topics in the syllabus unless he wishes to do so.

This definition has been evolved after much correspondence and study by "The National Commission on The Teaching of Elementary Physics," and is being freely adopted. The syllabus referred to is not reprinted here as there is little disagreement upon the principles which should be treated in the course. The list of forty-eight "essentials" which are named in it are properly emphasized in any of the texts referred to below. The division of the time into the three parts named,

class, demonstration, and laboratory, must be determined, with the equipment available in mind, but the schedule of three combination recitation-demonstration periods and two double periods of laboratory per week; using a good text, carefully prepared demonstrations, and a well developed series of carefully chosen laboratory experiments, very largely quantitative, may be considered as standard. With small classes some of the more difficult quantitative experiments may be worked out before the class but the fundamental difference in the impression made upon the mind of the student between a thing which he sees and a thing which he does with his own hands must not be overlooked. With larger classes where ample provision is made for demonstration and where it is difficult to quiz the students sufficiently in the demonstration periods, additional recitations should be provided for quiz purposes.

PURPOSE.

What are the objects sought in the high school course in physics? It is obvious that the teacher must have a fairly definite idea of what he is working for before results can be attained. Otherwise his efforts will result in the blind presentation of a multitude of rules and phenomena, weakly correlated and improperly emphasized. In no course is this more true than in physics. It will be said that physics teachers cannot agree on what the purpose should be. This is true but it is also true that it is more important that each teacher should have a fairly orthodox purpose clearly in mind than that a definite purpose be agreed upon by all and promptly overlooked.

With this in mind we will venture to state the objects sought in physics in the high school, and to arrange them in the order of their importance.

A course in high school physics should—

1. Give the student an intelligent insight into the phenomena, both natural and artificial, with which he comes into contact in daily life.
2. Cultivate the observational faculty and enable him to distinguish between essentials and non-essentials in the bringing about of results in any physical process.
3. Develop the powers of logical analysis and of systematic or "scientific" thinking.
4. Strengthen the student's mathematical training by giving him an opportunity to use his mathematics in varied and interesting concrete problems and theorems.
5. Develop accuracy and skill in manipulation, and a general, working knowledge of the physical properties of materials.
6. Prepare the student for a college course.

A study of this statement of purpose will show that in the physics course the student should devote himself to the thorough mastery of fundamentals rather than the memorizing of rules and principles which he cannot interpret or apply to concrete cases. The teacher who makes

the course simply a series of statements of facts regarding natural or devised phenomena, with little attempt to analyse or interpret them, and who makes the laboratory a place where results are secured, no matter how, should not deceive his class by calling the course physics. They should understand that they are getting a rather disjointed and uninteresting form of nature study. It has been said that the student does not have the power of reasoning at the age when he ordinarily is given the course in physics. The results with properly handled classes show that this is incorrect and further show that the year's work in physics may be the means of a wonderful development in this direction. Another mistake that is frequently made is to ask the first year student to perform an experiment and then to analyze his results to the point where he is able to re-discover some fundamental law, hitherto unknown to him. No one familiar with such research will admit that it is proper to teach the student to draw final conclusions upon the basis of a single two period experiment. Either he will be hopelessly lost in the attempt or he will do a little quiet investigating among his fellows to find what has been found to be satisfactory to the instructor by those who have tried it before. Of course this general statement has exceptions and in some cases carefully worded questions will bring out the desired conclusion properly, but as a rule the inductive process should be shunned as a method which is good when it can be made to succeed but dangerous when carried beyond the simplest principles. Some teachers will always insist that if the student works toward a conclusion that is already known to him he will lose all interest in the laboratory. It must be remembered however that the study of a principle in the class room does not give the concrete, working knowledge which is necessary before the principle can be intelligently applied. It is this definite, "experimental," knowledge of the principle, making it a working tool in the student's mind, which gives value to the course in physics and makes laboratory work a vital part of it. The laboratory should deal as largely as possible with the elucidation of those basic principles upon which the whole structure of science is founded and the management of the class should be such as to leave no opportunity for the student to perform the experiment with no thought as to its meaning. The all too common plan of giving the student a blank form to fill out with data and hand in without comment or conclusion is very weak in this respect. There is no reason why the student should be required to accumulate such a mass of data as to give him no time to think of what he has demonstrated, and there is no better chance in the high school for the student to develop the art of clear and definite exposition than in writing out clearly and in good form his conclusions from each laboratory experiment. It is feared that many teachers have permitted themselves to accept reports containing only meaningless data, simply because this reduces the unpleasant task of grading the reports. The schedule of the school must determine whether the student shall write up his report during the period or hand it in later,

but in either case let the report indicate some thought on his part and be definite, logically arranged, and expressed in language somewhat similar to that recommended by the English department.

So far as the class work is concerned it seems needless, in view of the admirable text-books available, to specify the items which should be taken up in class. A few words regarding the method of treatment may however be in order. First we must remember the purpose for which we are giving the course. We must neither make it a sugar-coated description of natural phenomena, nor must it be a course in mathematical review in which the physical principles are used simply as starting points for series of mathematical equations which neither the student nor the teacher is able to properly interpret. We must keep in mind that our object is primarily to make the student understand the physical principles presented, using mathematics, logic, demonstrations, problems, and laboratory work as means to that end. The text which practically eliminates mathematics because the student will not like it and substitutes extended historical notes, half tones of familiar scenes or of complicated machinery, which are supposed to illustrate some mildly stated principle and to gradually work it into the mind of the pupil with no effort on his part, should not be used. The class may show the interest, (or perhaps we should say they show signs of being entertained), that the book is designed to maintain but the result can hardly be anything but a hazy and general knowledge with little ability to interpret concrete phenomena or to solve definite practical problems. On the other hand, the book which devotes its pages largely to the accurate and rigorous demonstration of various mathematical relations, some of which may be important, leaving little room for interpretation of the formulae or for clearly worded elucidation of the principle under discussion, is sure to discourage and disgust the weaker part of the class and to only partially attain the end desired with the others.

Choose a book which states its principles clearly and definitely, makes clear the meaning of every formula and uses formulae only where they will add to the clearness of the analysis, uses plenty of carefully chosen diagrams and illustrative applications, but which never loses sight of the basic principles which it is trying to drive home. No teacher should confine his own study to the text in use but will find great advantages in taking special illustrations and demonstration methods from sources unfamiliar to the student, and a survey of other treatments of a topic will give the teacher the depth of view which is so important in holding the attention of a class. A good reference book of more advanced grade should always be at hand to settle those questions which no teacher can always answer. A Text-Book of Physics, by Watson, Longmans Green and Co.; Ganot's Physics, revised by Atkinson, Wm. Wood & Co.; General Physics, by Hastings & Beach, Ginn & Co.; Elementary Lessons in Electricity and Magnetism, by Thompson, Macmillan Co., are some of the best for this purpose.

THE LABORATORY.

One of the most difficult tasks for the teacher where funds are limited is to determine just what apparatus is needed and how many of each particular piece. It is a serious question also for the school management to decide when to add the course in physics. How large an investment will be needed before the course can be made worth while? How great an annual expenditure will be required to keep it up? These questions cannot be answered accurately as a great deal depends upon whether the teacher has time and facilities for making and repairing things or not. A good shop and a teacher with some ingenuity and time will cut the expense of getting given results very considerably. This applies both to the laboratory and the demonstration work. In the laboratory the first step toward economy should be to abandon the idea of having all the class do the same experiment at the same time. While there are some things in favor of a definite order in which all of the class should perform the experiments there are plenty of opportunities in the series to make slight changes in the order so that two or more experiments may be in use at the same time. It is not uncommon to provide only one-fourth as many sets of apparatus as there are pairs of students in one section. This requires that they work in pairs and that four different experiments be offered at the same time. This, if carefully handled, is fairly satisfactory except that in the earlier experiments in each division of the subject more sets should be provided so that the students will not be required to work in advance of the class work and so be unnecessarily confused. Where possible the students should work alone so they will have to work out their own manipulation problems. With careful grouping they may work in pairs very well however. It is seldom possible to get satisfactory results with more than two in a party for one or more are sure to be very willingly crowded away from the actual work of the experiment and so lose the benefit desired. Pupils of the same mental caliber and ingenuity should be placed together rather than to expect a strong student to carry a weak one along. The latter may be easier for the instructor but the strong student will seldom feel his duty to his partner sufficiently to prevent his missing the essentials of the work.

Many pieces of apparatus such as balances, barometer, etc., need not be duplicated, at least to the full extent, as they are used only momentarily and can be used by several groups during the period. On this account the cost of equipment per student decreases as the number of students increases. An instructor should not be expected to handle more than thirty per section and this only when well equipped and given ample time for preparation outside of laboratory hours. It is ordinarily better to divide into sections rather than to have two instructors in the laboratory at the same time as with division into sections a further economy in apparatus results. For a class of forty, for example, the class should be divided into two sections for labora-

tory work. These sections may be divided into ten pairs per section. Five sets of apparatus should be provided for the first four experiments of the year and for the first two experiments in sound, heat, etc., and three sets in all others except perhaps a few of those requiring more expensive equipment which could be handled with two sets for each. Equipment for this laboratory, including just the things needed for the experiments, and of the grade suggested in the list below would cost about \$400. This can be reduced to about \$250 by choosing the most economical apparatus that will do the work but this will not pay in the end and should be avoided if possible.

A great deal of the laboratory equipment may be used for the demonstration room but the teacher should be provided as rapidly as possible with a good lecture room equipment. No limits can be set on the expenditure for this work but the teacher should choose carefully and for definite uses, being sure that each device added will be of real value in establishing the principles which most need demonstration. Frequently the demonstration of some law can be done with apparatus set up in a few minutes by the teacher more effectively than by the use of an expensive device sold for the purpose, so the teacher should not choose such equipment without careful consideration.

The supplies needed to maintain the laboratory are few and inexpensive, being very largely battery supplies and glassware to replace breakage. A small set of tools will be found essential for repairing and maintaining the equipment even if no serious attempt at making apparatus is undertaken.

LABORATORY OUTLINE.

It will not be our purpose to specify an entire laboratory course in any sense but it is thought desirable to present a list of those experiments which should be included in a good laboratory course, with some suggestions as to apparatus and methods. Reference will not be made to a wide list of texts or manuals as this would lead to confusion and inconvenience without due return. Those chosen are good ones which should be found on every teacher's desk. They are also quite different in treatment and contents.

Those experiments, (so frequently the refuge of the teacher with a small equipment), which deal with methods of measurement or are geometrical rather than physical in their nature should be kept down to the minimum needed to prepare the student for the real work of the course and should be mingled with physical things where possible. The metric system should be followed almost exclusively throughout the course, and the use of decimals in all calculations and measurements insisted upon. This will require that a little more time be devoted to practice work in measurement but will save time in the end. Qualitative experiments are frequently ruled out altogether but this ruling is not because of any very fundamental superiority of the quan-

titative experiment but because it is nearly always difficult to so arrange a qualitative experiment as to be sure that the desired principle has been properly illustrated. We must remember that any means to attain our end, that of making the basic principles perfectly clear, are permissible. It is a poor laboratory that does not have some experiment peculiar to itself and frequently these original methods are among the best in the course. This tendency toward originality together with the fact that no two laboratories are similarly equipped makes it desirable for the teacher in most cases to get up his own direction sheets for at least a part of the course. The greater number can usually be found in some good manual with which the students should provide themselves.

No matter what the experiment is the teacher must be watchful to prevent large errors due to defects in the method or the apparatus. Nothing will weaken the interest of the most promising students so quickly as to find that with the apparatus given them it is impossible to demonstrate the principle in mind without a strong appeal to the imagination.

In the following list the text-books referred to are:

Carhart & Chute, *High School Physics*, ('07 ed.) "C. & Ch."

Millikan & Gale, *First Course in Physics*, ('06 ed.) "M. & G."

Hoadley, *Brief Course in Physics*, (1st ed.) "H."

while the manuals referred to are:

Laboratory Exercises in Physics, by Twiss, ('07 ed.) "Tw."

A *Laboratory Course in Physics*, Millikan & Gale, ('06 ed.) "M. & G. M."

A *Laboratory Manual of Elementary Physics*, Roberts, ('07 ed.), prepared for the use of the elementary classes at the State College of Washington, and called the "State College Manual," "S. C. M."

The numbers in the last column are the catalogue numbers of the apparatus needed and refer to "Catalogue M" of the Central Scientific Co. of Chicago. Reference is made to this catalogue because of its completeness and good arrangement. No teacher should confine his equipment investigations to a single firm's product.

No.	EXPERIMENT.	Text Reference.	Manual Reference.	Apparatus.
1.....	Center of Mass.	M. & G., p. 22.....	S. C. M., Exp. 19.....	Make
2.....	Volume, Weight, and Density.....	C. & Ch., pp. 116-8.....	Tw., Ex. 6.....	131
3.....	Accelerated Motion.....	M. & G., p. 25.....	S. C. M., Exp. 8 and 9. S. C. M., Exp. 10.....	3829 Make
4.....	Freely Falling Bodies.....	M. & G., p. 25.....	Tw., Ex. 2.....	Make
5.....	Comparison of Masses by the Acceleration Method.....		S. C. M., Exp. 26, Tw., Ex. 5.....	Make
6.....	Hooke's Law of Elasticity.....	M. & G., pp. 108-11.....	Tw., Ex. 7 and 8.....	3856
7.....	Parallelogram of Forces.....	M. & G., pp. 14-7.....	Tw., Ex. 10.....	3967 and 745
8.....	Parallel Forces—Moment of Force.....	H., pp. 44-6.....	Tw., Ex. 13.....	730
9.....	Inclined Plane—Equality of Work Done in Raising Car.....	C. & Ch., p. 88..... M. & G., p. 156.....	S. C. M., Exp. 17..... M. & G. M., Exp. 16.....	771
10.....	Sliding Friction.....	M. & G., p. 167.....	Tw., Ex. 11..... S. C. M., Exp. 21.....	Make
11.....	Moments of Forces—Wheel and Axle.....	C. & Ch., p. 85..... M. & G., p. 156.....	S. C. M., Exp. 18.....	Make
12.....	Pressures in Liquids.....	C. & Ch., p. 106.....	Tw., Ex. 20.....	Make
13.....	Archimedes Principle—Density of a Solid.....	M. & G., pp. 51-4.....	S. C. M., Exp. 27. M. & G. M., Exp. 7.....	Note 1 below
14.....	Density of a Liquid by the Bottle Method.....	C. & Ch., p. 119..... H., p. 134.....	S. C. M., Exp. 34.....	Note 2
15.....	Density of a Light Solid.....		M. & G. M., Exp. 9.....	3827
16.....	Boyle's Law.....	C. & Ch., pp. 136-8.....	Tw., Ex. 27.....	1055
17.....	Linear Expansion.....	M. & G., p. 142.....	S. C. M., Exp. 39.....	1559, 1533
18.....	Melting and Boiling Points.....	C. & Ch., pp. 255-8.....	M. & G. M., Exp. 24.....	1501, 1503
19.....	Cooling Curve Thru Change of State.....	C. & Ch., p. 291.....	M. & G. M., Exp. 21.....	.....
20.....	Specific Heat—Method of Mixtures.....	C. & Ch., pp. 269-73..... M. & G., pp. 182-5.....	M. & G. M., Exp. 18 and 19.....	Make
21.....	Latent Heat—Melting.....	M. & G., pp. 196-202..... C. & Ch., p. 276.....	S. C. M., Exp. 40..... Tw., Ex. 31.....	Make
22.....	Latent Heat—Vaporization.....	M. & G., pp. 203-6.....	S. C. M., Exp. 41 and 42. Tw., Exp. 32.....	Make

23.....	Expansion of a Gas at Constant Pressure.....	H., p. 228.....	Ayres, Ex. 41.....	Make
24.....	Dew Point—Humidity.....	M. & G., p. 97-101.....	TW., Ex. 29.....	Make
25.....	Thermal Conductivity.....	M. & G., p. 216.....	S. C. M., Exp. 44.....	1613
26.....	Velocity of Sound.....	C. & Ch., p. 151.....	S. C. M., Exp. 47.....	533
27.....	Length and Velocity of Sound Waves.....	H., pp. 175-8.....	M. & G. M., Exp. 38.....	4981,
28.....	Pitch of Sound.....	C. & Ch., pp. 166-7.....	S. C. M., Exp. 48.....	3016
29.....	Vibrations of Stretched Wires—Overtones.....	M. & G., pp. 369-73.....	S. C. M., Exp. 49.....	881, 837
30.....	Location of Image in Plane Mirrors.....	C. & Ch., pp. 198-201.....	TW., Ex. 45-6.....	Make
31.....	Focal Length of a Concave Mirror.....	C. & Ch., pp. 204-8.....	S. C. M., Exp. 50.....	Make
32.....	Index of Refraction.....	H., pp. 388-92.....	S. C. M., Exp. 54.....	Make
33.....	Focal Length of a Convex Lens.....	H., pp. 405-7.....	M. & G. M., Exp. 45.....	Note 3
34.....	The Simple or Astronomical Telescope.....	C. & Ch., p. 247.....	TW., Ex. 54.....	Make
35.....	Intensity of Light Sources, Candle-power.....	M. & G., pp. 392-5.....	S. C. M., Exp. 56.....	Note 3
36.....	The Magnetic Field.....	C. & Ch., p. 307.....	S. C. M., Exp. 59-60.....	Note 3
37.....	Study of Magnets—Molecular Nature.....	C. & Ch., p. 305.....	M. & G. M., Exp. 48.....	Make
38.....	Study of Magnets—Strength and Distribution.....	H., pp. 249-51.....	S. C. M., Exp. 53.....	1729
39.....	Static Electrical Effects.....	M. & G., Chap. 13.....	TW., Ex. 49.....	.....
40.....	The Voltaic Cell.....	C. & Ch., pp. 337-44.....	M. & G. M., Exp. 25.....	Note 4
41.....	Ohm's Law and the Laws of Resistance.....	C. & Ch., pp. 362-6.....	S. C. M., Exp. 62.....	1707, 1715
42.....	Measurement of Resistance—The Wheatstone's Bridge.....	M. & G., pp. 273-5 and 277.....	M. & G. M., Exp. 27.....	Make
43.....	Electrolysis.....	C. & Ch., p. 375.....	M. & G. M., Exp. 28.....	1951
44.....	Electro-magnetic Relations—the Electro-magnet.....	C. & Ch., pp. 349-54.....	M. & G. M., Exp. 32 and 3.....	2110, 2110
45.....	Induced Currents.....	M. & G., pp. 299-302.....	TW., Exp. 39.....	a-e, Note 5
46.....	The Telegraph.....	M. & G., pp. 312-15.....	M. & G. M., Exp. 35.....	2475, 2414,
		M. & G., pp. 302-4.....	M. & G. M., Exp. 36.....	2441, Nte. 6
		M. & G., pp. 312-15.....	M. & G. M., Exp. 37.....	2135
		M. & G., pp. 302-4.....	M. & G. M., Exp. 38.....	2601
		M. & G., pp. 312-15.....	M. & G. M., Exp. 39.....	Make
		M. & G., pp. 302-4.....	TW., Ex. 38.....	2335, 2339,
		M. & G., pp. 302-4.....	S. C. M., Exp. 71.....	2343

NOTE 1.—The new "Laboratory and Student's Balance," sold by Wm. Gaertner and by The Central Scientific Co. and probably by others, is a very satisfactory balance for most of the work of the course.

NOTE 2.—Use any glass stoppered bottle of suitable size for the balance used.

NOTE 3.—For lenses and mirrors of any size, type and focal length write to Bausch & Lomb Optical Co., of Rochester, N. Y., or The Scientific Shop, Chicago. Lenses and mirrors should be not less than 3" in diameter for good results.

NOTE 4.—This experiment can be carried out nicely with the Jolly balance by fastening a tack or a bit of iron wire to the lower scale pan.

NOTE 5.—A quite satisfactory galvanoscope can be made as shown in M. & G. M., p. 80. The compass used should have a pointer at right angles to the needle like No. 1765. For Exp. 40 above, this type will be rather better than a d'Arsonval because its sensitiveness is more easily adjusted.

NOTE 6.—See also the Wheatstone's Bridge set of Eberbach & Son Co., of Ann Arbor, Mich.

High School Bulletin No. 5

English in High Schools

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HIGH SCHOOL BULLETIN NO. 5

FOR THE

High Schools of Washington

ENGLISH IN HIGH SCHOOLS

By MISS IDA K. GREENLEE
UNIVERSITY OF WASHINGTON

ISSUED BY THE
DEPARTMENT OF EDUCATION

HENRY B. DEWEY
Superintendent of Public Instruction

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AUG 27 1910

The Study of English in the High Schools

INTRODUCTION.

As the college entrance requirements for the years 1909-1911 extend over a much broader field than heretofore, it has been found necessary to issue a second pamphlet covering the English work to be done during the high school course.

The fact that the new requirements give more leeway to the English teachers is very pleasing to those who have been watching the growth of that study. The separating of the course into groups of READING and PRACTICE, and STUDY and PRACTICE will do much toward unifying the English work.

All of the methods and plans suggested in this pamphlet are products of the personal experience of the author, and as such are adaptable to the various conditions of high school work.

The extracts of the forty or more books have all been handled in the class rooms by the author of this bulletin, and the suggestions made are the results of what the atmosphere of the class room called for.

The outlines are based on the fact that regular work in English has been carried on during the classes preliminary to the high school. If, however, such has not been the case, then the teacher, by referring to the Supplementary Reading List, found at the close of this bulletin, may be able to select such books as are available and assign them for home study, asking the pupil to bring in either an oral or a written report of the reading. If this suggestion is diligently followed, it will not be long before the pupil will be able to accomplish the regularly required work.

PURPOSE.

Since the report of the committee of ten specifically states that the main objects of the teaching of English are, "first, to enable the pupil to understand the expressed thoughts of others; second, to enable him to give expression to thoughts of his own; third, to cultivate a taste for reading, to give the pupil some acquaintance with good literature, and to furnish him the means of extending that acquaintance," it is necessary that both ORAL and WRITTEN COMPOSITION go hand in hand with the study of the assigned texts.

If the texts are properly studied, the pupil will receive information concerning the history of English literature, as the development of literature is pointed out through the medium of the selected authors. There are found characteristic selections of every period of development.

LIST OF COLLEGE ENTRANCE REQUIREMENTS.

The following is the list for college entrance for the years 1909-1911. It is made up into seven groups, six of which are for READING and PRACTICE, and one for STUDY and PRACTICE. The matter of selection is left with the teacher in charge. It is presupposed that the teacher has a working knowledge of every book in each list and that he can most wisely choose such as are best fitted to the requirements of his case.

The list covers the full four-year course and will be so indicated in this pamphlet. The figure to the left of each title indicates the year in which that book may most profitably be studied by the high school pupil.

READING AND PRACTICE.

Group I. [Select Two.]

- First Year.—Shakespeare—As You Like It.
Second Year.—Shakespeare—Henry V.
Second Year.—Shakespeare—Merchant of Venice.
Third Year.—Shakespeare—Julius Caesar.
Third Year.—Shakespeare—Twelfth Night.

Group II. [Select One.]

- Second Year.—Bacon—Essays.
First Year.—Bunyan—Pilgrim's Progress. Part I.
First Year.—Addison—The DeCoverley Papers.
First Year.—Franklin—Autobiography.

Group III. [Select One.]

- Third Year.—Chaucer—Prologue.
Second Year.—Spenser—Faerie Queene.
Third Year.—Pope—Rape of the Lock.
First Year.—Goldsmith—Deserted Village.
First Year.—Palgrave—Golden Treasury (first series), books II. and III., paying especial attention to Dryden, Collins, Gray, Cowper, Burns.

Group IV. [Select Two.]

- First Year.—Goldsmith—Victor of Wakefield.
First Year.—Scott—Ivanhoe.
First Year.—Scott—Quentin Durward.
Second Year.—Hawthorne—House of Seven Gables.
Fourth Year.—Thackeray—Henry Esmond.
Third Year.—Gaskell—Cranford.
Second Year.—Dickens—Tale of Two Cities.
Third Year.—Eliot—Silas Marner.
Fourth Year.—Blackmore—Lorna Doone.

Group V. [Select Two.]

First Year.—Irving—Sketch Book.

Second Year.—Lamb—Essays of Elia.

Second Year.—DeQuincey—Essays—Joan of Arc and The English Mail Coach.

Fourth Year.—Carlyle—Heroes and Hero Worship.

First Year.—Emerson—Essays (selected).

Third Year.—Ruskin—Sesame and Lilies.

Group VI. [Select Two.]

First Year.—Coleridge—Ancient Mariner.

Second Year.—Scott—Lady of the Lake.

Second Year.—Byron—Mazeppa, and Prisoner of Chillon.

Third Year.—Palgrave—Golden Treasury (first series), book IV., with especial attention to Wordsworth, Keats, and Shelley.

First year.—Macaulay—Lays of Ancient Rome.

Second Year.—Poe—Poems.

First Year.—Lowell—Vision of Sir Launfal.

Third Year.—Arnold—Sohrab and Rustum.

Fourth Year.—Longfellow—Courtship of Miles Standish.

Third Year.—Tennyson—Gareth and Lynette, Lancelot and Elaine Passing of Arthur.

Fourth Year.—Browning—Cavalier Tunes; The Lost Leader; How They Brought the Goods News from Ghent to Aix; Evelyn Hope; Home Thoughts from Abroad; Home Thoughts from the Sea; Incident of the French Camp; The Boy and the Angel; One Word More; Herve Riel; Pheidippides.

STUDY AND PRACTICE.

Fourth Year.—Shakespeare—Macbeth.

Third Year.—Milton—Lycidos, Comus, L'Allegro, Il Penseroso.

Fourth Year.—Burke—Speech on Conciliation with America, or

Second Year.—Washington's Farewell Address, and Webster's First Bunker Hill Oration.

Third Year.—Macaulay—Life of Johnson, or

Third Year.—Carlyle—Essay on Burns.

PRACTICAL SUGGESTIONS.

In this assignment you will notice that there is none made for the first year but for Reading and Practice; that the literature for Study and Practice is left for the last three years of the course. This, however, does not mean that the work of the first year is to be simply reading, but, instead, that the pupil shall be so directed in his reading that he will be able better to take care of the study that is to follow in the other years.

You will further note the opportunity of the teacher to choose from the various groups in such a way as will enable the child to get a fair

idea of the different styles of writing. For instance, where in previous years the course was limited to three of Shakespeare's plays, we have now a choice of three out of six. The same idea holds good in the introduction of Palgrave's Golden Treasury selections, which can be made to take the place of a formal text on English literature. The spirit and history of the time always show themselves through the writings of that period. And we are told to select from the Golden Treasury the writings of Dryden, Collins, Gray, Cowper, Burns, in order that the pupil may be shown the tendency of the times; after which, for the same purpose, comes especial attention to Wordsworth, Keats and Shelley.

The wise course to pursue under any conditions is to let the pupil HAVE THE BOOK IN HIS HAND, and read, and read until the lines sink into his memory so that he may be able to recite almost any short selection read in class. Just as a musician can not say he has mastered his "PIECE" until he has memorized it, so a pupil does not really SENSE the thought unless he is able to recall the language in which that thought is uttered.

It is the design of this pamphlet so to arrange the entrance requirements as will save the greatest amount of time to the over-worked teacher. Following out this idea, I have, with the help of the various students of the University of Washington who have been in my class in College Entrance English, prepared lists of suggestive questions on the various books to be studied, as well as those that are to be read only. If the teacher will use these lists as SUGGESTIVE questions and let the conditions of her class provide whatever else is necessary, she will find them to be a great saving of time to her.

The true teacher ever has in mind the good she can accomplish. She is always anxious as to whether she is really teaching the pupil how best to utilize his time. The most glaring fault in our educational system of today is the fact that our boys and girls DO NOT KNOW HOW TO STUDY. They chew their pencils and dream, but they do not STUDY. If you ask a pupil, when he complains of the length of his lesson, how much time he really put on the preparation of the lesson, which in all probability might have been thought out in twenty minutes, he will look at you with an injured expression and say, "It took me over two hours and then I didn't get it." Such an answer is a very familiar one to a teacher of experience. Now, it seems to me, if the teacher of English would only explain the relation one sentence bears to another; how the paragraphs are in themselves little compositions; how the various thoughts are held together by special kinds of words that we call LINK-WORDS; and how certain paragraphs are used simply as transition paragraphs; if the teacher, I say, would but point out how, if we understand the wording of the problem we can solve it, how if we can see the relation certain words bear to certain other words in the sentence we can master the idea characterized in that sentence,

she would open the eyes of the pupil. Only by such means will the child appreciate and understand the value of the study of English. There is no need to "parse our way through *Paradise Lost*"; no piece of literature need to be so critically studied as to lose the beauty of the expressed thought. The first thing a good teacher does is to awaken the interest of the pupil so that he will really enjoy his English lesson. How can she best do this? First of all, the pupil should have the text of the lesson IN HIS HAND, BEFORE HIS EYES. The only way to learn to read is by reading. The pupil is not learning LITERATURE when he listens to the story reproduced by some member of the class who has had the privilege of reading the text himself. He is simply hearing the story, SHORN OF ITS LITERARY MERITS. He is to get from his reading not only the story, but also the personality of the author. He is to become familiar with the diction, the phraseology of the author; how the author holds his thoughts together; how he refers back to some previously uttered sentiment; how there is nearly always one sentence in the paragraph that gives the central idea of the paragraph; how all the other sentences are setting this idea forth in a clearer light; such suggestions will go far toward showing the pupil how to WRITE A COMPOSITION—the bugbear of childhood. I like Genung's remark that rhetoric is literature in the making. While the teacher is showing the beauty of thought and the exactness in the expression of the sentiment, she is unconsciously giving the pupil one of the fundamental principles of construction English.

I am more and more impressed with the idea that English grammar should be given at least one half-year in the high school curriculum, the year in which it occurs depending on the general condition of the school; but it should be studied as a text-book, not used to create a disturbance in the enjoyment of the work in English literature. It is true that the child has been studying grammar throughout his school life, but he has studied it unconsciously. He should, at some point in his high school career, work CONSCIOUSLY on the principles of English grammar.

SUGGESTIONS.

AS YOU LIKE IT.

Whenever a Shakespearean play is to be read or studied, the first thing a wise teacher will do is either to tell the class of the theatres of Shakespeare's time, himself, or to have some of his pupils who have made preparation on the subject do so. If something of this kind is done the pupil will feel the atmosphere of the play, and when the boy is really in sympathy with the times, it is very much easier to keep his mind on the regular action of the play under consideration. The next step is to ask the pupils to learn the names of the people who take part in the play. Never assign less than the first act as the first lesson. A good way to assign the lesson is to ask the class to

write out where each scene takes place and the names of the characters as they appear on the scene; for instance,

Act I.

Scene I.—Oliver's Orchard. Characters—Orlando, Adam, Oliver, Charles.

Scene II.—A Lawn Before the Duke's Palace. Characters—Celia, Rosalind, Touchstone, Le Beau, Duke Frederick, Orlando, Charles.

Scene III.—A Room in the Palace. Characters—Celia, Rosalind, Duke Frederick, asking the class to mark any lines, as they read over the lesson, that they think worth memorizing and commit them. The class should be led to see that the first act has a special mission to perform, viz: It is the work of this act to introduce the audience to the principal characters of the play by presenting these characters on the stage or through reference to them in such a way as will enable the audience to know the part they are to take in the action of the play. That Act I. must also foreshadow the action that is to follow; must outline the causes of the action; must bring out the salient points of the characters. In reading the play with the class, it is a good plan to ask the following questions after reading each scene, viz: What has this scene done to advance the story? What light has been thrown by it on the character of the persons concerned? These questions will enable the pupil to see for himself the real value of every scene. Such careful reading will soon put the pupil in touch with the spirit of the play so that when the time comes for a critical analysis of any of the great tragedies, he will not be at a loss as to how to proceed. It is most essential that the teacher himself be familiar with the text of the play studied, and to this end he should read and read carefully the entire play whenever he asks his class to read one act of it. The main thing to be accomplished in this play is a knowledge of the lines, an understanding as far as possible of the characters and the story of the play. The pupil should not be so burdened with points to look up that he will feel the preparation a hardship. When the reading of the play is over, it is a pleasant exercise to try to recall which one of the characters uttered words of wisdom, which of witty sayings, etc., always being careful to remember the conditions under which each was uttered. . .

HENRY V.

Before reading Henry V. tell the class some of the facts in the life of the real Henry. Tell them he was born in 1388 and died in 1422; that his father was Henry IV.; his grandfather was John of Gaunt; and his great grandfather Edward III. Say to them that this is not a fully rounded play, but is rather a succession of loosely woven scenes. The king is made greater, far superior, to any other character in the play. It is very evident that Shakespeare is holding him up to the people as a model of honor and dignity, and that his

object for so doing is to stir their patriotism. There is, too, a very striking contrast between the English and the French armies. Shakespeare uses this to show the courage, seriousness, honesty and patriotism of the English soldier in contrast to the flippancy, conceit and arrogance of the French. Tell them that the play is almost an epic, showing as it does the characteristics of Henry V. As most of the class will have had some European history, let them give to the other members enough of the history of that time to make them appreciate Shakespeare's characterization of Henry V. In order to enjoy the play, the pupil must have a pretty good idea of the times the play illustrates.

Make the assignment along the same lines that you made the first assignment of "As You Like It." As there is so marked a difference in the adjustment of the two plays, it will be necessary to tell the pupil what has been previously stated, to-wit: the play is not a drama, but an epic.

Ask the pupils to point out the lines that show the facts previously stated concerning the character of the king; of the English soldiery as compared with the French, etc. Have the pupils commit Henry's first speech before Harfleur. Call their especial attention to his address to the governor; his replies to the herald; and to his soliloquy in the camp. Show them the value of the prologues, explaining the necessity for them especially in this play. The main purpose to be accomplished in the reading of this play is what has been suggested in *As You Like It*.

JULIUS CAESAR.

Formerly, *Julius Caesar* was one of the plays given over to careful study; now we read it much after the same manner that we do the other plays. Because this play is a tragedy, it is well for the teacher to explain the terms generally used in studying tragedy, viz: Introduction, Rising action, Climax, Falling action, Catastrophe, Conclusion, somewhat after this fashion: AN INTRODUCTION is to prepare the listener for the play. It should do four things, viz: Tell where the play occurs, when it occurs, the principal characters, and the mood of the play. A RISING ACTION begins with the exciting force and must continue towards a climax. It is the force that changes things from repose to action. A CLIMAX is the turning point; that is, the moment when the party that has been successful during the first part of the play reaches its greatest power, a moment after which the reversal begins. A FALLING ACTION is initiated by the tragic force and generally begins about the latter part of the third act. A CATASTROPHE marks the close of the struggle and must be so related to the falling action as to seem the inevitable outcome of it. A CONCLUSION leaves a satisfied feeling regarding the denouement of the play.

The teacher may show that the first stage in the RISING ACTION is where, in Act I, scene 2, the conversation takes place between

Brutus and Cassius; that it finally closes with the address of Brutus in Act III., scene 3; that the CLIMAX of the play also occurs in the same act in Mark Antony's speech, when the tide turns against the party in power, i. e., Brutus and his followers; that the FALLING ACTION is introduced in the same speech; that the CATASTROPHE is in Act V., scene 5, where Brutus slays himself, and the CONCLUSION is the final arrangement for the disposal of Brutus's body. During the reading in class the teacher may show the different stages of both the rising and the falling action. Show the pupil how Caesar is looked upon by the populace; that Shakespeare depicts not Caesar's real character, but the character AS THE POPULACE SEES IT. Do not let the pupil receive the impression that Shakespeare was caricaturing Caesar. During the reading of the lesson contrast the characters of the play. It is needless to require special things of the class, as the lesson time is all the happier if the pupil discovers for himself, through the teacher's reading of the lines, something he had not seen when reading alone. In all of Shakespeare's plays read by pupils of high school age, the chief aim sought is to familiarize the pupils with the lines, locating when, where and by whom spoken.

THE MERCHANT OF VENICE.

This play is to be read not from the standpoint of tragedy, but from that of ROMANTIC COMEDY. The Merchant of Venice has both the rising and the falling action found in tragedy, but with the difference that the force which, in tragedy, is in the ascendancy during the rising action, and which, during the falling action, is the loser, becomes, in comedy, the winner. An elementary study of the structure of the plot should be made, but the chief aim should be to arouse an abiding interest in Shakespeare. It is therefore necessary that the teacher impress upon the mind of the student beauties of both thought and form. The pupil may be told that the dramatic problem is to get Bassanio married without injury to Antonio. That the climax is about the middle of Act III., scene 2, where Bassanio wins Portia; but that this very scene, which furnishes the crowning of Bassanio's desires, also brings the news of Antonio's losses; thereby introducing the falling action. The FALLING ACTION continues to the scene where Portia foils Shylock.

Because this play is a comedy and not a tragedy, there are several episodes introduced, viz: The Lorenzo-Jessica episode and the higher action of Old Gobbo and his son Launcelot. A great many questions might be asked on the text, but these questions should be asked at the time the recitation is in progress, not given out for the child to prepare. He should spend his time for preparation in the reading of the lines, so that when the lesson is called he will be familiar enough with the wording of the play to enable the teacher to proceed intelligibly.

A list of questions on the text will be given at the close of this pamphlet.

TWELFTH NIGHT.

Shakespeare's Twelfth Night is a genuine comedy. It is a continual display of both the rarest and sweetest of FANCIES. Shakespeare has, in this fascinating little comedy, drawn with a master hand, blending harmoniously the utmost grace and refinement of sentiment with the keenest effects of humor, the sharpest wit, yet withal the utmost benignity.

Let the class read this comedy with the four characters in view, viz: Viola and Olivia, Malvolio and Sir Toby. Show them the lines that depict the different characteristics. The main points to be observed in all work in literature are: to inculcate a love for reading; to show the pupil how to read and enjoy; to make FRIENDS of his books.

BACON'S ESSAYS.

As the formal study of rhetoric is generally pursued in the second year of high school, it is well to use these Essays to explain the real value of expository writing.

Using the term essay with the accent on the last syllable expresses what is really attempted by the writers of Essays. The teacher should explain to the class that Bacon spoke of this collection as "certain brief notes, set down rather significantly than curiously, requiring leisure in both the writer and the reader." An essay is simply an endeavor to do something. The charm of the ESSAY lies in its flexibility. It should be SHORT, CLEAR, and PLEASING.

Before reading these delightful little bits of literature, the teacher should instruct the class concerning the life of Bacon: When, where, and under what conditions he lived; during whose reign, etc., so that they will be in the atmosphere of the times. Even though there be no library within reach, yet there are now on the market so many really well edited texts of all the classics that for the small outlay of five dollars the teacher can have a good working library for his needs.

I here present a short analysis of the essay entitled SUSPICION:

I. Introduction—

Definition of Suspicion, viz: "Suspicious amongst thoughts are like bats among birds—they ever fly by twilight. They are defects not in the heart, but in the brain."

II. Discussion—

"There is nothing makes a man suspect much, more than to know little;

And, therefore, men should remedy suspicion by procuring to know more and not to keep their suspicions in smother."

III. Conclusion—

"Suspicious that the mind of itself gathers are but BUZZES;
but suspicions that are artificially nourished * * * have
STINGS.

If these little essays are analyzed during the reading in class, the pupil soon gets into the habit of analyzing as he reads, silently; such being the case, the teacher so far has succeeded. Attention should also be called to the philosophic remarks in the Essays, but nothing should be explained concerning THE BACONIAN THEORY.

- PILGRIM'S PROGRESS.

As Pilgrim's Progress is the greatest allegory in the English language, the teacher can impress upon the class the value of figurative speech. Pilgrim's Progress sets forth the trials and experiences of the Christian life in a pilgrimage from the "City of Destruction" to the "Celestial City." Keeping this idea in view before the class, it is only necessary to guide the reading; the questions will take care of themselves.

- DE COVERLY PAPERS.

It is always an open question as to the year in which the De Coverley Papers may best be studied. During my high school teaching they were generally taken care of in either the first or the second year; I have placed them in the first.

The best way to read and enjoy the DeCoverley Papers is to familiarize the class with the conditions that inspired the Papers. Discuss the two men, Addison and Steele; their relations to one another; what the coffee-houses were; how people traveled in those times; what was the status of religion and politics; what of the popular amusements, etc. In other words, never try to read anything with the class until you are sure that they are ready to enjoy it.

A list of suggestive questions on these Papers will be found at the close of this pamphlet.

- FRANKLIN'S AUTOBIOGRAPHY.

There need be no suggestions offered on the reading of this book. Its quaint manner of expression, its quiet humor appeal to the normal boy or girl and it would be cruel to ask an abnormal pupil to try to enjoy it.

- CHAUCER.

There are so many delightful editions of Chaucer at the present time that I shall present only a few suggestions as to the method of bringing the story before the class.

It is always necessary to know something of the life and times of an author. Indeed little joy is found in the stories of Chaucer unless the mind goes back to Chaucer's time; to the time when people

were ignorant of most scientific facts. His poetry shows a mind as simple as a child's in its utter abandonment to fancy. After learning of Chaucer's life the class will be ready to listen to the story of the Tales. Do not try to do too much with the grammar of the lines. Teach the Prologue carefully and the Tales will be well understood. The rhythm of the lines and the story in the Tale are about all that can be expected of the class, as a class, in the time allowed for the reading of Chaucer.

FAERIE QUEENE.

The teacher should give a short account of the beginning of our English literature, carrying the history up to the time of Spenser.

After a thorough discussion of Spenser's life and times, teach the SPENSERIAN STANZA. Show the rhyme scheme—*a b a b b c b c c*—telling the class that the last line of the stanza is an Alexandrine. Measure, or scan, several of the stanzas to prove the truth of your teaching. The stanza and the story are about all the teacher will have time to explain. Ask the class to read as much of Canto I., Book I., as they can give time for. Be sure to show the beauty of the allegory.

RAPE OF THE LOCK.

While this poem may seem a little absurd to the average high school pupil, yet he may be made to appreciate it if the meaning of the term SATIRE be made clear to him. It is a satire on the society life of Pope's time. It also parodies the heroic style in poetry. The poem was suggested by a trivial act of rudeness committed by one of the lords of society, viz: The cutting off of a lock of hair from the head of one of the beauties of the day.

Pope's classic style of writing should be commented on and credit given him for his strength in the world of letters. Explain what is meant by the development of the Romantic movement.

DESERTED VILLAGE.

The Deserted Village, by Goldsmith, can be made a profitable investment in the line of memory work. There is no poem more replete with choice sayings. Then, too, everything picturelike is portrayed as well as if it were given to us on a canvas. Let the pupils select the lines that portray stillness, action, life, death; those that are pure narration. Note the style of the rhymed couplet and tell the class something of the man who set that style. Always bear in mind the fact that real literature is best taught through the WRITINGS of the man, not through his biography.

This poem should be read and re-read until the class feels its beauty. The teacher can do much to make a pupil understand and love the English literature work if he himself will but show, through

his reading and explanation in class, that he, too, appreciates the diction, the pictures, the rhythm.

PALGRAVE'S GOLDEN TREASURY.

The following list of poems is submitted for class reading and memory work:

Dryden—

Song for St. Cecelia's Day.—To be read.

Alexander's Feast.—To be read.

Collins—

The Passions.—To be read.

Ode to Evening.—To be read.

Gray—

Elegy Written in a Country Churchyard.

The Bard.

Commit all of the Elegy. Read THE BARD, explaining the characteristics of an ODE. Study the personification words in the poem.

Cowper—

Loss of the Royal George.—To be read.

The Solitude of Alexander Selkirk.—To be read.

Burns—

Ye Banks and Braes o' Bonnie Doon.—Commit.

To a Mouse.—Commit.

Highland Mary.—Commit.

John Anderson.—Commit.

The foregoing should be studied in the first year of high school.

VICAR OF WAKEFIELD.

The story of the Vicar of Wakefield should be read in such a way as to enable the class to become familiar with 18th century life and literature. Something should be told them of both the mind and the art of Goldsmith.

The titles of the chapters give all the information necessary concerning the story. It will be left with the teacher to take the class back to the 18th century atmosphere.

IVANHOE.

Give to the pupils a short account of the life of Scott; enough to give them some idea of him as a man. Tell them something of the time of Richard I.; of the Normans; of feudalism; of chivalry; of the crusades; of a tournament; the Wars of the Roses. Draw a map of England on the board showing that part of the country drained by the rivers Derwent, Trent, Don, thus giving them "the lay of the land."

Group the characters for the class and teach them to pronounce the names correctly. Keep the Saxons in one group, viz: Cedric and Athelstone, Robin Hood and Friar Tuck, Gurth and Wamba; and the Normans in another, viz: Prince John, Fitzurse, De Bracy, Front-de-Bocuf, Malvoisin, Bois-Gilbert, The Templars. After explaining all this to the class, set them to reading the book for themselves.

An appended list of questions will be given later on in this pamphlet.

QUENTIN DURWARD.

In selecting Scott's works, no matter which is chosen first, there should always be a short account of Scott's life given to the pupils. In reading Quentin Durward, tell the class the condition of the times during the reign of Louis XI., in the latter part of the 15th century. Compare Louis XI. with his great contemporary, Edward IV. Never let the pupils lose sight of the fact that while Scott was a great novelist, he was also a great and good man; that he did not allow himself to become embittered with misfortune; that his nature was kindly and his disposition sunny. Set the class to reading, the first time for the story, and the second for a discussion of the plot, etc.

Questions will be found at close.

HOUSE OF THE SEVEN GABLES.

Something of the life of Hawthorne must be told the pupils. They cannot fully enjoy the story until they know intimately the life of the man that created the story. In the House of the Seven Gables the author has depicted the chief characteristics of our New England ancestors. We are here shown the appearance of the town, its streets, its stores, its people. We are even made aware of the style of serving dinners, of the toys used by the children, of the old-fashioned flower gardens, etc.

The average high school boys and girls are unable to grasp the deeper meaning hidden in this wonderful story, but if they are told how to read carefully, following each character from the beginning to the end; noting the lesson Hawthorne is always teaching; viz: That even though the world in its hurry sees only what is on the surface and pays tribute accordingly, still true value will ultimately appear and be properly rewarded, they will gain much.

Though there may not be time to discuss this book in class, still I would ask the pupils to read it.

HENRY ESMOND.

I have placed this novel in the fourth year because only after having had three years of good drill in reading the best literature is the pupil ready to fully appreciate this best historical novel. The title character, Henry Esmond, is unfolded before our eyes; we see

his growth; we live with him throughout his career; and we are always in good company, for Henry Esmond, no matter where we find him, is a true gentleman. Thackeray was a realist, and as such, his stories must be read.

Have the class read up on the life of Thackeray and learn the names of his chief works, the characters in them that are as familiar to society today as during his time. Show the class the artistry exhibited in his descriptions of people, the developing and working out of character. Thackeray is accounted one of the greatest artists, if not the greatest, among English novelists.

CRANFORD.

The high school boy or girl who does not enjoy Cranford is abnormal. There is scarcely need to say anything to the class about the book. It wins its own way. It is altogether charming. It is scarcely a novel, but a series of sketches—portraits of people.

A short list of questions is appended.

A TALE OF TWO CITIES.

A short introduction to the life of Chas. Dickens should be the first lesson. Tell the class of his early struggles with poverty, of his meagre school training, of his great desire for reading, how he spent all of his spare time in the British Museum devouring literature. Give them a list of his novels, sketching some of the chief characters for them. Interest them in Dickens before asking them to read. Tell them that the book is full of dramatic scenes and situations, and then ask them to be on the lookout for such when they read the book.

The story teems with topics for composition work. Let the children select illustrations of Dickens' fondness for CARICATURE, PATHOS, DESCRIPTION, or any other characteristic. The reading of this book should create a desire in the child to read more of Dickens. BE SURE THAT HE DOES.

SILAS MARNER.

Silas Marner has been one of the English requirements for so many years that it seems almost unnecessary to suggest anything concerning its presentation. It has served its purpose well. After talking with the class concerning George Eliot and her life, her books, her wonderful strength of mind and character, tell them what a real novel is. That in analyzing this novel we will first discuss the PURPOSE for which the story was written; next the CHARACTERS; then the DESCRIPTIONS; after which we will point out the DRAMATIC INCIDENTS. It will be very easy for the class to see the plot that runs through the story. Let them group the characters and become acquainted with their personality as people. It is a pleasant exercise to let the class

dramatize some of the scenes in the story. For instance, the scene between Godfrey and Dunston in chapter III. In dramatizing a scene, remember the following points:

1. Carefully choose the scene.
2. All characters need not appear on the stage.
3. Make a direct beginning and a direct ending.
4. Be explicit concerning SETTING, ENTRANCES, EXITS, CURTAIN, DIRECTIONS.
5. All directions should be given in the present tense.

LORNA DOONE.

There is such an indescribable charm in the way the story of Lorna Doone is told that the average high school pupil will become so absorbed in the story itself, that he will have to be told what to look for specifically. The story abounds in quaint figures of speech, artistic descriptions (indeed, some of these seem to be written almost in poetic measure), superstitions and folklore.

The story depicts the stirring time of England in the seventeenth century. It is in this sense strictly a historical novel, as, indeed, are Henry Esmond, Tale of Two Cities, House of the Seven Gables, Ivanhoe

Let the class be told of the houses, the country roads, the fogs and the darkness that prevailed; how people in general paid tribute to gangs of robbers; how a man was never safe if traveling alone after dark, even in the cities where watchmen were supposed to be—anything and everything that will enable the pupil to feel the atmosphere of those times.

A digest of this book is appended.

SKETCH BOOK.

Irving's sketches should be read, not only to show his masterly use of descriptive words, but also to enlarge the child's vocabulary. The reading of any work, if done from a sense of duty only, is productive of little benefit. If the pupil is taught to see and love the good, he will find lasting enjoyment. We read for pleasure, then why not let the pupil enjoy these and other sketches in the class room? Let the problems they suggest to the teacher be worked out in class. It is the teacher's duty to show the class HOW TO READ. Let the teacher intimate where the pupil may find other stories of like fascination and she will find no difficulty in getting the reading done.

ESSAYS OF ELIA.

If the class is to study these essays, I wish it were possible for every member to read them from the little text prepared by Helen J. Robins, teacher of English in Miss Baldwin's school at Bryn Mawr,

published by The Macmillan Co., N. Y. The introduction to the Essays is worth three times the cost of the book. In it, the life of Charles Lamb with his sister Mary is so daintily, delicately told that every pupil after reading it would be more than ready to enjoy the Essays.

Further comment is unnecessary. The book is in the Pocket Classic series and costs 25 cents.

JOAN OF ARC AND THE ENGLISH MAIL COACH.

As DeQuincey in the essay on Joan of Arc does not supply the knowledge of her life that is really necessary to the enjoyment of the essay, the teacher should outline, briefly as possible, the time she lived, the part she played in public and military affairs, her long confinement and trial and her triumphant death; and the final tardy justice that was done the Maid of Orleans.

After this brief introduction, ask the pupil to read the essay and report his idea of it in writing. Not a review of the essay, but simply to show how the story of it impressed him.

The English Mail Coach may be read for the sake of studying DeQuincey's style.

HEROES AND HERO-WORSHIP.

Begin the study of these lectures of Carlyle's by explaining to the class that they were really delivered as lectures in London, on the afternoons of Tuesdays and Fridays beginning Tuesday, May 5, 1840, and closing Friday, May 22, 1840. Tell them that Carlyle generally spoke from notes, and that these essays were delivered in that manner; that they were afterward written out and published at the request of some of his friends; that they furnished the topic of conversation at the clubs for months. In fact, the teacher must arouse some enthusiasm for Carlyle before reading the essays or the class will not be as generous toward his style as they should be.

The lectures are, all of them, capable of being analyzed under the three parts, viz: Introduction, discussion, conclusion or summary. It is comparatively easy for the boys and girls to divide them as Carlyle did, but as their logical development ends with the simple division, it is somewhat harder to make the class see the coherent truths uttered concerning each hero. But if the teacher will study with the class, leading them to select the life-giving sentence in the paragraph, it will not be long before the boys and girls will be able, by themselves, to choose the most pertinent thoughts. The chief trouble will be in the explaining and tracing of the allusions which sometimes require a good library for reference. Compare the ruggedness of Carlyle with the smoothness of Emerson. Note the difference in diction.

EMERSON'S ESSAYS.

In speaking of the life of Emerson, do not fail to mention the great friendship existing between him and Carlyle; of their correspondence, incidentally showing the value of being able to write a good letter.

The essays on Friendship and Character are generally the ones most enjoyed by high school pupils. Study the man as well as his writings.

SESAME AND LILIES.

Study life of Ruskin, comparing it with that of the authors previously studied. In his lecture on King's Treasuries, he gives as good advice on books as can be found anywhere, so, with that as his text, it is very easy for the teacher to arouse the best impulses of his class. Call especial attention to Ruskin's remarks on Milton's diction, as later on in his school life the pupil will come across the poem that contains the criticized lines.

ANCIENT MARINER.

In introducing the Ancient Mariner, first create an atmosphere through the use of the diction in the story itself; for instance, it was an ANCIENT mariner, etc. As soon as the class are alive to the spirit and times of the poem, begin the reading after the following manner: Tell the class there are three parties represented as speaking, viz: the person who gives the outside information, the mariner, and the wedding guest. Call the attention of the class to the use of the quotation marks. Let the teacher begin the poem as the person who gives the outside information; let one-half the class read the words spoken by the wedding guest, and the other half those spoken by the mariner; all reading in turn, will soon put the class in shape to understand the poem.

Teacher:

It is an ancient mariner
And he stoppeth one of three,

First half:

"By thy long gray beard and glittering eye,
Now wherefore stopp'st thou me?
"The bridegroom's doors are open wide
And I am next of kin;
The guests are met; the feast is set;
May'st hear the merry din."

and so on through the dialogue.

Tell the class of the friendship between Coleridge and Wordsworth; of his earlier friendship with Southey; how Coleridge and Southey married sisters; how Coleridge charmed everyone with his eloquence; of the influence Wordsworth and his sister Dorothy had

on Coleridge's life; and anything that will impress the pupil. Tell them that the little volume called *Lyrical Ballads*, brought out by Coleridge and Wordsworth, is called the most famous landmark in the history of the Romantic movement. Then explain what is meant by the Romantic movement. In fact, as much as possible, give the class some of the history of literature during the recitation time.

The poem should be read as a unit; that is, the ENTIRE poem should be read in class before it is studied by stanzas or parts. Show, DURING THE READING, how the poem acquires a supernatural atmosphere; note the measure of the poem and the effect of the variation of stanza; comment on the figures used; narrate the actual happenings; give the dramatic features of the poem.

VISION OF SIR LAUNFAL.

The Vision of Sir Launfal is to me a representation of an improvisation which finally grows into a strain or theme that the organist uses to represent various moods, or, as the musician would say, movements. He takes us through the whole gamut of life, telling a story meanwhile—The Holy Grail—and just as the organist portrays to his audience through the medium of his movement, joy, sorrow, pleasure, pain, so does Lowell give to us the suggestiveness of how pleasure is to be obtained. Unless the entire story is read at one sitting, the value of the PRELUDES is lost and the poem seems illy fitted together. True, there are certain parts of the poem that may be treated as wholes, but only in the same sense that an andante of some great masterpiece is an entirety. Do not make the Holy Grail the main story. It is only an incident.

The children ought to commit nearly all of the poem, not because they have it set before them as a task, but because it UNCONSCIOUSLY sinks into their hearts.

Figures of speech, imagery of all kinds may be discovered in the poem, but let them remain there to preserve undisturbed the joy of its beauty.

LADY OF THE LAKE.

Teach the children this story by cantos. Let them know what the term CANTO means; how it is one of the divisions of a poem, the same as an ACT is one of the divisions of a drama. Have them learn the topics of the cantos in order, viz:

Canto I.—The Chase.

Canto II.—The Island.

Canto III.—The Gathering.

Canto IV.—The Prophecy.

Canto V.—The Combat.

Canto VI.—The Guard Room.

Question the class on the style of each canto. Show them how

the diction is in accord with the spirit of the topic. Select the songs or lyrical parts of the story. Show why canto V. contains no songs. Have a map of the country in which the story is set and let the class follow the chase, etc. Give the class the historical setting also. When teaching this poem give the following definitions to the class:

An Epic is narrative, dealing with events.

A Lyric is subjective, as it deals with feelings.

A Ballard gives ONE incident in the life of the central character.

A Hymn is a lyric; it is a regularly measured piece of devotion.

An Ode is a lyric.

A Love-song is a lyric.

All of this to give a sort of introduction to poetic forms.

MAZEPPA AND THE PRISONER OF CHILLON.

Tell the class as much of the life of Byron as is necessary. Teach them the titles of his chief works paying especial attention to "English Bards and Scotch Reviewers." Speak of his short life, of his wonderful energy, of his lineage, of his death and funeral.

Read the two poems with the class, explaining as you read. Tell them the stories on which the two poems are based. Byron visited the Castle of Chillon, etc. Mazeppa was a Cossack who had deserted from the Russians and joined the Swedes under Charles XII. The story is told by Voltaire in his History of Charles XII.

LAYS OF ANCIENT ROME.

As later on in the school life the pupils are to study, critically, one of Macaulay's essays, they should at the time of reading his Lays be made familiar with certain phases of his life. The Lays of Ancient Rome are imaginary reproductions of lost ballads of the Romans.

In reading these ballads, be sure to have the pupil understand the allusions. The ballad goes with a swing that holds the attention, so that the class will enjoy it more if they can read it in its entirety.

POE'S POEMS.

The story of Poe's life should be told to the class. Do not forget to mention his prose works and the strange tendency of his writings. The pupils should commit several of Poe's shorter poems; for instance, Evening Star, Israfel, Annabel Lee.

The class should read The Bells, The Raven, Ulalume, at recitation time, and as many more as possible of the remaining poems at home.

SOHRAB AND RUSTUM.

Arnold's poem is generally classified in the list of narrative poems. It is the reproduction of an old Eastern tale having Fate as the ruling power. It should be explained to the class from that standpoint. The story is in itself very attractive, but it can be made much

more so if the teacher will carry out the allegorical signification. The poem should be read and commented upon in class.

AFTER having read the poem, tell of the life of Arnold, his other poetic works, his contemporaries, his position in the literary world, his undisputed title as "One of the very best critics in the literary world."

THE COURTSHIP OF MILES STANDISH.

The story part of this poem is familiar to all the boys and girls of the grammar grades, but it should be read by the high school pupil from the standpoint of style in versification. The pictures it presents, the diction, the use of figurative language, the smoothness, the grace of the lines, all should be shown to the class. Let them try their hand at dramatization, but do not let them paraphrase.

IDYLS OF THE KING.

Unless the story of King Arthur and his Knights of the Round Table is thoroughly explained to the class, the fragments of the Idyls are not properly understood, and, as some of the Idyls are in the form of allegory, while others are representing the real, it is very hard to explain them to the class. The Idyls chosen are rather long to read in class, so the teacher should ask the pupils to read all three of them before trying to conduct a recitation on any, one. Especial stress should be laid on the complete mastery of blank verse as used by Tennyson in these Idyls. The Idyls should be read and re-read, so that every member of the class will be familiar with not only the story, but also with the language used by Tennyson.

The teacher should get from the class all the information possible concerning the life of Tennyson. The class should be told his rank as a poet and also the names of his best known poems.

The Idyls to be read are Gareth and Lynette, Lancelot and Elaine, and The Passing of Arthur.

BROWNING.

The life and writings of Browning should be discussed in class. The most a high school pupil can do with the poetry of Browning is to FEEL the sentiment without being able to express himself. It would be better not to enter into a discussion concerning what one gets from reading Browning. Ask the pupils to read ALL of the selections offered, committing such as appeal to them.

GROUP FOR STUDY.

MACBETH.

Macbeth is the purest type of tragedy. It is one of the four great tragedies of Shakespeare. The following is based on Morley's Edition of Macbeth, 1886:

When the play opens, Macbeth and Banquo are winning the crowning victory that saves King Duncan's throne, imperiled by the strong assaults of foreign invasion and domestic treason. Foremost in bodily valor, Macbeth especially is winning to himself the honors of the day. After the king's sons, hitherto not of age to be declared successors, he is Duncan's nearest kinsman. In the elation of his victory he may, if his regard to the right for its own sake be weak, lie open to one temptation. The eldest son of Duncan was not yet declared heir to the throne. Duncan away, Macbeth, fresh from a crowning victory, would wear the crown by right of usage and by force of the triumphant army at his back. Opportunity less tempting has in old time led generals to seek a crown by murder of a king. The hour of Macbeth's temptation was born of his victory. The whole first act of Macbeth is planned to develop the temptation, and the powers of evil are first shown waiting to strike

"When the hurly-burly's done,
When the battle's lost and won."

They prepare to meet Macbeth on the heath, and then vanish into thunder-cloud, whence they came.

Having opened the play thus with suggestions of its theme, in the WORKING OF SATAN FOR TEMPTATION AND DESTRUCTION OF A SOUL, Shakespeare tells the story of the battle in the words of a bleeding captain who has hurried to King Duncan. * * *

At the end of the play Shakespeare marks, as plainly as at the beginning, that Macbeth was physically brave. But he also marks throughout as distinctly that Macbeth was morally weak. His chief desire was to stand well with the world: and to the day of his temptation all had been well with him. He had lived an honorable life in the world's eyes, because favor in the world's eyes is on the whole to be secured by living honorably, and dishonorable deeds bring wordily discredit with them. Macbeth is, in fact, a grand poetic type of a very common form of moral weakness. He does not strongly seek to do right for the love of right, but he seeks weakly to do right for love of the worldly convenience that right-doing brings

The witches' scene with Hecate, and the witches' scene at the opening of Act IV, recall firmly the motive of the poem in "THE WORKING OF SATAN WITH ALL POWER AND SIGNS AND LYING WONDERS AND WITH ALL DECEIVABLENESS OF UNRIGHTEOUSNESS IN THEM THAT PERISH." They do more. They prepare for the fourth act by the distinct foreshowing of the poet's purpose in it. The tale is of the ruin of a tempted soul. Shakespeare has shown clearly what kind of soul it is that lies most open to the tempter: he has represented the swift passage from crime to crime; and now Hecate, the mistress of their charms, the close contriver of all harms, looks angrily on the weird sisters, whose

temptation has not yet dragged Macbeth down to be companion of fiends. Thus far all they have done

“Hath been but for a wayward son,
Spiteful and wrathful; who, as others do,
Loves for his own ends, not for you.”

Thus far, all crime has been to win, and to secure some earthly gain; has had a motive with a touch in it of human reason. Macbeth has been but a wayward son of the powers of darkness, loving evil for his own deeds, not for itself: not for you, who are evil itself:

“You murdering ministers
Wherever in your sightless substances
You wait on nature’s mischief.

For the complete perdition of the tempted soul, it must be dragged down to the lowest deep, till it do evil without hope of other gain than satisfaction of a fiendish malice. This, yet to be obtained, is the triumphant close of the working of Satan. Its attainment, WITH ALL POWER AND SINS AND LYING WONDERS, the fourth act is to show, where Macbeth gains no end but the satisfaction of a fiendish malice and cruelty by the murder of Lady Macduff and her children. This foreshadowing of the motive of the fourth act includes also preparations for the fifth act, which has for its theme the Retribution. So the five acts are arranged with a clear, practical design in their succession, as follows:

Act I.—The Temptation.

Act II.—The Murder of Duncan.

Act III.—Downward, as consequence of that, to the Murder of Banquo.

Act IV.—Complete ruin, in passage to the Murder of Lady Macduff.

Act V.—And thus, The Retribution—the reaping of the whirlwind.

I have noticed that the tendency of all teachers presenting this tragedy is to bring forward a discussion as to whether the guilt should be laid at Lady Macbeth’s or Macbeth’s door; when, in reality, the play, being a tragedy, should be explained as a tragedy. Now, the general understanding of the term “tragedy” as used in the drama is that it is a tremendous struggle made by a noble man; but a struggle in which, because of his own weakness, he is defeated. To my mind, Lady Macbeth is simply used to round out Macbeth’s figure. Therefore, it is not wise to discuss Lady Macbeth’s character from the standpoint of tragedy. Follow Macbeth from the time of his meeting the witches, after his victory, through the first three acts, keeping the theme, THE POWER OF EVIL, before you, and you will then see that the disposition Morley has made of Macbeth is a good one.

I do not mean to say it is unwise to discuss Lady Macbeth's character; it ought to be talked of, as should also that of Banquo and others, but from the standpoint of comparison as men and women in a story.

The witches as the POWERS OF DARKNESS have more to do with the play than is generally conceded to them.

The Introduction puts us in possession of the facts concerning the time, the place, the characters and the mood, finishing with the fifth scene in Act I, where Macbeth tells Lady Macbeth that Duncan comes to their place tonight.

The first instance of the exciting force of the rising action, or what changes things from their condition of repose, occurs in Act I, Scene 3, when Macbeth "STARTS" at the greeting of the witches. This should be traced step by step through to the climax, which occurs in Act III, Scene 3, where Banquo and his son Fleance are set upon by robbers and Fleance escapes.

The falling action begins when, in Act III, Scene 3, the murderer tells Macbeth that he has done only half his duty and Macbeth exhibits his fears to Lady Macbeth, through his inattention to his guests.

The catastrophe occurs in Act V, Scene 7, in the fight between Macduff and Macbeth.

The conclusion occurs in the same scene, making disposition of Macduff as King of Scotland.

MILTON'S LYCIDAS.

This poem is a wail for a learned friend who was drowned in his passage from Chester on the Irish Seas, 1637. It incidentally foretells the ruin of the corrupted clergy.

The first fourteen lines are the statement of the occasion for writing the poem.

The next eight lines are an invocation to the Muse.

The twenty-third line brings the poem into the pastoral and so continues to line sixty-four

"Alas! What boots it with uncessant care,"

where begins the first digression. This continues until Milton has delivered himself of the account of the corrupted clergy, closing with line one hundred thirty-one.

In line one hundred thirty-two he again invokes the Muse, continuing this invocation through line one hundred fifty-three. The elegy begins with line one hundred sixty-five:

"Weep no more, woeful shepherds, weep no more,"

continuing through line one hundred eighty-five. The last eight lines are a sort of epilogue.

This poem should be read several times for the sake of its poetic

beauty. After having read it until the class feels the music and rhythm of the poem, explain how at first every poet, before writing, made an invocation to the Muse. Call the attention of the class to the variety of verse form; to the rhyme; to the allusions.

It is a good thing to read, in connection with this poem, Ruskin's disposition of Milton's diction, found in *Sesame and Lilies*.

Do not spoil the poem with too much analysis, but simply show there is a regular sequence of parts, interrupted by digressions.

The life of Milton should be well talked over and the following stanza committed:

Three poets, in three distant ages born,
¹Greece, ²Italy, and ³England did adorn.
 The first in eloquence of thought surpassed;
 The next in majesty; in both the last.
 The force of nature could no further go;
 To make a third, she joined the other two.

¹Homer.

²Dante.

³Milton.

MILTON'S COMUS.

Teach first the meaning of the term masque. Tell when and for what purpose this masque was written. Have the class learn the names of the characters, the same as if it were a real drama they were studying. Take note of the shifting of scenes and the characters that come on in the various scenes.

The first speech made by the Attendant Spirit is in the nature of a prologue. It is also left with this spirit to tell the lesson of the play in the last five lines. The class will enjoy tracing the argument of the play, and to that end will not need much help.

Note carefully the blank verse and the lyrical passages. Never fail to bring out the ethical value of Milton's poems.

If the life and times of Milton have not been studied by the class, they should be before reading any of his minor poems.

MILTON'S L'ALLEGRO AND IL PENSEROSO.

As these poems are both short, I would never read one without also reading the other. They are companion poems. They are pictures of the life of the same man in two different moods. The plan of the two poems is, in general, the same. Both begin with an invocation and a forceful mythological genealogy and proceed to describe a series of imagined typical experiences.

L'Allegro, representing the cheerful man, deals with conditions and circumstances favorable to the daylight, the morning. On the

other hand, we find Il Penseroso representing the meditative man, who seeks shadow, not sunlight; whose thoughts are deep, intense.

Let the class compare these two poems as to

- a. Introduction,
- b. Plan and structure,
- c. Versification and use of words,
- d. Dramatic background and picture-painting,
- e. Conclusion.

In all of the minor poems will be found much to commit, not to memory, but BY HEART.

BURKE'S SPEECH ON CONCILIATION.

In studying this speech of Burke's, I have used the following outline for the classes and found it to be of great help:

- A. The History of the Discussion.
 1. The proposition is peace.
- B. The Two Capital Questions.
 1. Whether you ought to concede.
 2. What your concessions ought to be.
- C. Commerce—with the colonies—of the colonies.
 1. Compare with Pennsylvania.
 2. Fisheries.
- D. American Love of Freedom.
 1. Descendants.
 2. Protestantism.
 3. Legal studies.
 4. Distance from center of authority.
 5. Self-government in America.
 6. Population cannot be checked.
 7. Unalterable character of the Americans.
- E. Indicting a Whole People.
 1. Criminal prosecution inexpedient.
 2. Not a question of abstract right.
- F. Taxation Is Useless.
 1. Defiance of fact and experience.
 2. Cases of Ireland, Wales, Chester, Durham.
 3. Representation impossible.
- G. Discussion of Resolutions.
 1. Competence of Colonial Assemblies.
 2. Liberality of the Colonies.
 3. Theory versus experience.
- H. Reasons for Repeal.
 1. Parliamentary precedents.
 2. Union of interests desirable.
 3. A labyrinth of detail.

I. The Power of Refusal.

1. Revenue from America impossible.
2. Magnanimity the truest wisdom.

If the teacher will go carefully over the Speech, with his class, according to this little outline, the pupil will be better able to cope with the wording.

Be careful to call attention to the masterful way in which Burke connects his paragraphs. Let the class select the link-words so used. Lead them to see that some of the paragraphs are transitional. Number the paragraphs, designating the ones that begin the new topics as per outline.

Call attention to his use of antithesis; to his ingenious summarizing; to the preciseness of his diction; to his pithy sayings. Select for the class the paragraphs that are oratorical. Make lists of reference words used by Burke.

The following Brief may be used profitably:

I. England should conciliate the colonies. (Found between paragraphs 15-64.)

II. The measures of conciliation adopted should satisfy the American complaint against taxation. (Found in paragraphs 65-88.)

III. Satisfaction of this complaint is possible without granting representation in Parliament. (Found in paragraphs 88-90.)

Study Burke's political life from Greene's History of the English People.

WASHINGTON'S FAREWELL ADDRESS and WEBSTER'S BUNKER HILL ORATION.

These speeches should be so taught as to infuse a noble patriotism into the hearts and lives of our school children. It is not enough that the boy be made to see the scholarly combination of thought and word; he should be made to FEEL the living pulsation of warm blood in his veins whenever he hears the patriotic utterances of either Washington or Webster.

Washington was not what would be called a literary man, yet he had so supplemented his limited education with careful reading, his devotion to his country was so large a part of his own individual life, that when he spoke he spoke from his heart, and his language carried with it a mighty earnestness. It is no wonder that he was so well able to say in words what his every pulsation of the heart dictated. His great anxiety for the Union was strong enough to inspire him with language in which to convey his thoughts. Let the speech be analyzed, but never so analyzed as to allow the class to lose sight, for even one moment, of the loyalty and patriotism it breathes.

WASHINGTON'S FAREWELL ADDRESS.

The subject of this address was The Welfare of the Country. It can be outlined under these nine heads, viz.:

1. Retirement from office.
2. Scope of the address.
3. The unity of government.
4. Dangers to the Union.
5. The spirit of party.
6. Elements of strength and security.
7. The treatment of foreign nations.
8. Personal hope and action.
9. Parting words.

WEBSTER'S BUNKER HILL ORATION.

This speech is not only a patriotic expression, but it is also one of the masterpieces of literature. In order to make the class feel its beauty and significance, the teacher must first see that the time, the place, and the occasion are all fully assimilated in the minds and hearts of his class. Unless some such atmosphere be created, it is almost a useless effort on the part of the teacher to try to present the oration.

The speech should be read and re-read, so that parts of it will linger in the mind and heart of the pupil. The teacher should show Webster's wonderful skill in the adjustment of the parts of his address. Better far to let the class feel the cadence of the tones as the thoughts are uttered than to criticize in any way either the rhetoric or the diction.

Subject—The Bunker Hill Monument.

1. The deep feeling of the occasion.
2. The monument itself.
3. The fifty years since the battle.
4. Address to the survivors.
5. Immediate causes and results of the battle.
6. Address to LaFayette.
7. Leading reflections, the great changes in fifty years.
8. Exultation in the influence of our country on human freedom and human happiness.

MACAULAY'S LIFE OF JOHNSON.

The study of Macaulay's Life of Johnson should give to the class not only Macaulay's inimitable style, but it should also furnish a fund of history of literature. The essay should be read and talked over in class for what it contains concerning the early struggles of famous writers, as well as for the way in which Macaulay says his thoughts. The pleasure or the pain that the class gets from this essay will depend almost entirely on the attitude of the teacher.

CARLYLE'S ESSAY ON BURNS.

This essay of Carlyle's enables us to more fully appreciate Burns. From this view it should be studied. Do not try to outline the essay. STUDY it for the sake of the truth it suggests, for the information with which it teems. Study it in class, calling attention to the facts it states and to the manner of stating them. Compare the lives of the two men, Carlyle and Burns. If possible, read the entire essay in class.

MISCELLANEOUS.

I cannot close these suggestions without making a few remarks on the value of keeping a notebook. Every pupil, and every teacher as well, should keep a record of his work. When the teacher assigns the lesson for the next day's work, it should be written in the pupil's notebook IN THE EXACT LANGUAGE USED BY THE TEACHER. The teacher should not make any assignment to the class unless he, too, keeps an account of it in his own notebook. It is the best plan to date every assignment. The few minutes spent in tabulating the lesson for the next day are not lost, by any means. As the pupil must be taught to write on but one side of the paper, a good way to get him into that habit is by having him use his notebook in that way. For instance, he can begin by using the right-hand side of his book. If it opens in the other way; by using the lower sheet, using the pages for lesson assignments. He may then turn his notebook around and use the OTHER SIDE OF THE LEAF, in order not to waste any paper, for special instructions in the form of helpful notes given by the teacher in the course of the lesson.

The pupil in the first year of high school, if he has not before done so, should begin consciously to acquire a vocabulary. To this end he should put a new word in his notebook EVERY DAY for a month. By that time, if the teacher has been careful to see that the pupil has made these words his own, he will begin to see the value of it, and will be doing, unconsciously—THE VERY THING DESIRED. Working from the back of the book toward the front is equivalent to having two notebooks, WRITING ON ONE SIDE OF THE PAPER ONLY. In this book there should also be placed lists of words used as connectives, memory gems, idioms, original figures of speech—in fact, anything that will make the work valuable.

With regard to the amount of memory work to be done in the high school, I want to go on record as saying that too much can not be done in that line. By memory work I mean the disciplining of the memory so that it will respond when called upon. It is comparatively easy for boys and girls of high school age to commit. It is, therefore, the time to give them an opportunity to store their minds for further use. The more you can have committed of the literature

of the English language, the better it will be both for the individual pupil and the school.

This bulletin has been prepared with the thought of the smaller high schools in mind, the schools that have fewer than two hundred pupils.

SUPPLEMENTARY LIST OF BOOKS.

The following list of books and selections may be used by the pupils who are not quite up to the grade work demanded for high school:

The XIX. Psalm.
 Aesop's Fables.
 Ernest Thompson Seton's LOBO.
 Emerson's THE RHODORA.
 Alice's Adventures in Wonderland.
 The Prince and the Pauper—by Mark Twain.
 Old Curiosity Shop—Dickens.
 The Boys of '76—by Coffin.
 Wonder Tales from Wagner—by Alice Chapin.
 Hans Brinker—by Mary Mapes Dodge.
 Tales from Shakespeare—Lamb.
 Science Sketches—David Starr Jordan.
 King of the Golden River—Ruskin.
 Story of Ruth—Bible.
 The Water Babies—Kingsley.
 Making of an American—Jacob Riis.
 Treasure Island—Stevenson.
 Scottish Chiefs—Jane Porter.
 Stories of Colonial Children—Pratt.

BOOKS FOR HOME READING.

Each pupil may be required to select from the following 1,000 pages for each of the first two years and 1,500 pages for each of the last two years. A wide range is given in order that every taste may be suited. The object is rather to get control of the home reading a pupil naturally does, than to add an additional task. If the pupil can be led to assume the right attitude towards this work he will read much more than the required number of pages.

FIRST YEAR.

The Nibelungen lied.....	How They Brought the Good
..... Roster-barham	News .....Browning
Lady of the Lake.....Scott	Incident of the French Camp..
Autobiography .....Franklin	..... Browning
Inchcape Rock.....Southey	The Burial of Sir John Moore..
Herve Riel.....Browning	..... Wolfe

FIRST YEAR.

Great Expectations.....	Dickens	Pepacton	Burroughs
The Talisman.....	Scott	Up from Slavery.....	
Tom Sawyer.....	M. Twain	.....	Booker Washington
Treasure Island.....	Stevenson	Conspiracy of Pontiac...	Parkman
King of the Golden River....		A Man Without a Country....	
.....	Ruskin	.....	Hale
Adventures of Ulysses.....	Lamb	House of Seven Gables.....	
The Jungle Books.....	Kipling	.....	Hawthorne
The Great Carbuncle..	Hawthorne	The Court of Boyville.....	White
The Leather Stocking Tales....		In the Wilderness.....	Warner
.....	Cooper	Rab and His Friends...Dr. Brown	

SECOND YEAR.

Old Testament Stories.....		Golden Treasury.....	Palgrave
Ben Hur.....	Lew Wallace	Oliver Twist.....	Dickens
Old Fashioned Girl.....	Alcott	Kenilworth	Scott
Being a Boy.....	Warner	Kidnaped	Stevenson
Poetry of the People.....	Gayley	The Greek Heroes.....	Kingsley
About Ben Adhem.....	Hunt	The Bottle Imp.....	Stevenson
The Sands of Dee.....	Kingsley	Rappaccunio's Daughter	
The Loss of the Birkenhead....		.....	Hawthorne
.....	Doyle	Montcalm and Wolfe....	Parkman
Ye Banks and Braes of Bonnie		Conquest of Granada.....	Irving
Doon	Burns	The Oregon Trail.....	Parkman
Three Fishers.....	Kingsley	Birds and Bees.....	Burroughs
The Death of the Flowers.....		Life of Dickens.....	Forester
.....	Bryant	As You Like It.....	Shakespeare
To a Waterfowl.....	Bryant	The Making of an American....	
		.....	Riis

THIRD YEAR.

Heatherale	Stevenson	A New England Girlhood.....	
The Private of the Buffs.....		.....	Larcom
.....	Doyle	The Story of My Life.....	
Helvellyn	Scott	.....	Helen Keller
The Forsaken Merman....	Arnold	The Story of My Life.....	
Highland Mary.....	Burns	.....	Anderson
The Bumble Bee.....	Emerson	The Life of Wm. Shakespeare..	
The Revenge	Tennyson	.....	Lee
The Lost Leader.....	Browning	An Inland Voyage.....	Stevenson
Twelfth Night.....	Shakespeare	A Leaf of Spearmint....	Van Dyke
The Taming of the Shrew....		Love's Meinie.....	Ruskin
.....	Shakespeare	A Bunch of Herbs.....	Burroughs
The Rivals	Sheridan	Memories of a Century.E. E. Hale	

THIRD YEAR.

My Summer in a Garden..Warner	Dr. Jekyl and Mr. Hyde.....
Gray Days and Gold.....Winter	..... Stevenson
English Land Lovers and Kings	Pilgrim's Progress.....Bunyan
..... Mitcheli	Aesope and Rhodope.....Landor
The Odyssey .....Palmer	Picciola .....Saintine
David Copperfield.....Dickens	Fanciful Tales.....Stockton
The Monastery .....Scott	Jean-ah Poquelin.....Cable
Utopia .....More	Tales of New England....Jewett
Richard III.....Shakespeare	A Doctor of the Old School..Wats
King John.....Shakespeare	Prologue and Knight's Tale....
Henry V.....Shakespeare	..... Chaucer
Boys' King Arthur.....Lanier	Jew of Malta.....Marlowe
Life of Goldsmith.....Irving	Dr. Faustus.....Marlowe
The Abbot .....Scott	The Newcomes .....Thackeray
Mill on the Floss.....Eliot	English Poets .....Ward
The Merry Men.....Stevenson	English Men of Letters....Morley

FOURTH YEAR.

McAndrew's Hymn.....Kipling	The Xmas Sermon.....Stevenson
Muleykeh .....Browning	The Silverado Squatters.....
The Gold Bug.....Poe	..... Stevenson
The Prisoner of Zenda.....Hope	The American Scholar...Emerson
Ozymandias of Egypt....Shelley	Prue and I.....Curtis
Ode to Duty.....Wordsworth	American Men of Letters..Morley
The World Is too Much With	Modern Painters.....Ruskin
Us .....Wordsworth	Queen of the Air.....Ruskin
I Wandered Lonely as a Cloud	Essays .....Green
..... Wordsworth	Arnold, Van Dyke, Mabie, Lowell
Saul .....Browning	White Murder Trial.....Webster
My Last Duchess.....Browning	Shorter History of England....
Eve of St. Agnes.....Keats	..... Green
Lamia .....Keats	Rise of the Dutch Republic....
Life of Johnson.....Boswell	..... Motley
Herod .....Phillips	Essay on Swift .....Johnson
Hamlet .....Shakespeare	Life of Henry Clay.....Schurz
Domby & Son.....Dickens	Essay on Idleness.....Repplier
Pride and Prejudice.....Austen	Literary Ethics.....Emerson
The Birthmark .....Hawthorne	Walden .....Thoreau
The Man Who Would Be King	Our Best Society.....Curtis
..... Kipling	On a Peal of Bells....Thackeray
The Procession of Life.....	Hard Fare.....Burroughs
..... Hawthorne	A Good Word for Winter.....
Adam Bede.....Eliot	..... Lowell
The Heart of Midlothian....Scott	Autocrat of the Breakfast Table
The Iliad ....Lang, Leaf & Meyer	..... Holmes

FOURTH YEAR.

On Friendship.....Cicero	The Crisis .....Churchill
Life of Scott.....Lockhart	
Life and Letters of Macaulay..	The Gentleman from Indiana..
..... Churchill	..... Tarkington

QUESTIONS ON THE REQUIREMENTS.

The following questions on the texts to be studied were made out largely by the students of the University of Washington who were members of my class in English College Entrance Requirements.

They are given here, not for the purpose of exhaustive study, but simply to suggest what course to pursue in the reading of the book in hand:

The following lists comprise questions on:

Sesame and Lilies.
 Idyls of the King.
 Cranford.
 Tale of Two Cities.
 Julius Casear.
 Sohrab and Rustum.
 Bunker Hill Oration.
 Lorna Doone.
 Burke's Conciliation.
 Quentin Durward.
 Lays of Ancient Rome.
 Ancient Mariner.
 Macbeth.
 Lady of the Lake.
 Ivanhoe.

The questions were taken from lists submitted to me by Edith Hammond, Eunice England, Rose Grout, Gertrude Walsh, Mae Murray, Ruth West, Genevieve Waite, Kate Gregg, Rene Seeley, Pearl Bennet, Irene Conner, and Catherine Sutherland, who were members of my class during '07 and '08, in their senior year of the University of Washington.

IDA K. GREENLEE.

LIFE OF RUSKIN.

If there is not a well-written sketch of Ruskin's life in the text book, give a short talk to bring out the points that influenced his life's work. A brief outline placed on the board will aid in keeping the main points clearly in mind. The following questions may then prevent any distorted impressions:

INFLUENCES OF EARLY LIFE.

1. Although born in London, of what nationality was Ruskin in blood and character?

2. Mention some of his characteristics probably due to Scotch ancestry.

3. What influences on Ruskin's lifework had: (1) The prosperity of his father; (2) The Puritanic character of his mother; (3) The extended trips through England; (4) The visits to the continent; (5) The books which were available to him?

WORK OF RUSKIN.

4. What is there unusual about the early works of this author?

5. Describe his manner of life during the growth of "Modern Painters."

6. What was the result in the work given us? (Ruskin a great art critics and master of English style.)

7. What are his acknowledged best works?

LATE LIFE.

8. Why was 1860 the turning point in Ruskin's life?

9. State the reason for this change.

10. What do you find of interest in Ruskin's social reform?

11. Describe one incident which shows the power of Ruskin's personality in later life.

12. Repeat the inscription of the Conniston toiler and apply it to Ruskin.

SESAME AND LILIES.

The first twelve paragraphs constitute the introduction. I have made out the following outline of this part for my own benefit. High school pupils will not be equal to this, I am sure, for I myself found it very difficult to keep the main and subordinate thoughts in their proper places:

Introduction.

I. Subject revealed—book treasures.

1. Thoughts about reading as a means of education.

II. Views prevalent regarding education.

1. Popular view—To gain material advancement or position in life.

2. Author's view—It may be an end in itself, as education is advancement.

III. Prevalent significance of advancement as a result of education.

1. Gaining of applause or conspicuousness lies at the root of all effort.
 - a. Sailor wants to be CALLED "Captain."
 - b. Clergyman wants to be CALLED "My Lord."
 - c. Prince wants to be CALLED "His majesty."
 - d. We want to be SEEN in good society.
2. Duty is, as a motive, secondary to the one of applause.
3. True desire to enjoy sensible friends, regardless of being seen with them, is another collateral motive.
 - a. The wisest choice of friends and the sincerity and wisdom shown in their attitude toward us, gives true happiness.

IV. Arguments that books give us this advancement better than contact with people can.

1. We can choose and keep personal friends as we wish.
 - a. Acquaintances are governed largely by chance.
 - b. We can't have those we know always with us.
 - c. Higher circles are only partially open to lower.
2. The society of books we can have as we choose.
 - a. Can have them with us always.
 - b. Are open to us regardless of rank.

V.—Our intercourse with books which leads us to advancement.

1. Why should we prefer casual personal talks to studied addresses in books?
 - a. The reason cannot be one of subject or time, for books range as widely as persons.
 - (1) Books of the hour—no great thought in them; simply multiplication of voice.
 - (2) Books of all time—perpetuation of voice. Thoughts deserving to last.
2. Should not waste time in casual talk. Give the precious moments to the books of all time.
3. Rise to the level of books and you can enjoy their company.

QUESTION TYPES ON "LAYS OF ANCIENT ROME."

1. What are the sources of the plot for each of the tales?
2. What is ballad poetry?
3. In what ways is ballad singing important in the life of our early people?

HORATIUS.

Questions to be asked as the poem is read:

1. Hunt up the cities on the map and see from what direction Rome's enemies came.

What was the "trysting place?"

3. Verse 12—Why a "banished Roman?"

4. What was the story of Tarpean Rock?

LAKE REGILLUS.

1. What was the legend of Castor and Pollux?

2. What was the "Ides of Quintills?"

3. Call attention to the figure, "slippery swamp of blood."

THE RIME OF THE ANCIENT MARINER.

PART ONE.

Verse 1. Who is speaking in lines 3 and 4. and whom is he describing, "By thy long gray beard," etc.?

Verse 3. Who is speaking in line 2, and who in 3? Is there anything peculiar in the wording?

Verse 4. Who is "he" in the first line? Why do you think the Wedding-Guest acts in this way?

Verse 6. What does "cheered" mean in the first line? Explain drop in the second?

Verse 7. In which direction were they going if the sun came up on the left?

Verse 8. Why does the Wedding-Guest beat his breast?

Verses 11 and 12. What figure do you find in these two verses? What is the comparison? Note the rapidity of movement.

Verse 13. Where is this place which he describes?

Verse 16. What is an albatross? Why lines 3 and 4?

Verse 18. Where did the south wind take them?

Verse 19. What does "vespers nine" mean? Do you see a picture in this stanza?

Verse 20. Why does the Wedding-Guest address the Ancient Mariner thus?

PART TWO.

Verse 1. Which direction were they going now?

Verse 3. Who is talking here? Who is "em," in second line? Is there more than one kind of discourse?

Verse 5. Isn't this a good picture of a boat flying through the water?

Verse 4. Why do they change their minds?

Verses 6, 7 and 8. What has happened to them? Do you notice any figures of speech?

Verse 9. Did you ever hear this quoted?

Verse 10. Do you know of anything to account for such unusual experiences?

Verse 11. What would make the water turn green and blue and white?

Verse 12. Why did the Spirit follow them? What does line 3 mean?

Verse 14. Why was the albatross hung around his neck?

PART THREE.

Verse 1. Do you see any rhetorical significance in the repetition of "weary?"

Verses 2, 3 and 4. Note the way he works up to a climax at "A sail! a sail!"

Verse 5. What does "gramercy!" mean?

Verse 6. What does he mean by "tacks?" Meaning of last line?

Verses 7 to 12. Explanation. Note vivid description, coloring, etc.

Verse 13. Does darkness really come so quickly in the tropics?

Verse 14. What is the figure in this verse? Is the comparison apt? What picture do you get from the verse?

Verse 15. Why did the dead men curse him?

Verse 17. Why did the flight of their souls sound like his cross-bow to him?

PART FOUR.

Why does the Wedding-Guest fear him? What do you think of this comparison?

Verse 3. Note alliteration and repetition for rhetorical effect. Doesn't the long vowel sound suggest loneliness and space as used here?

Verse 6. Why couldn't he pray?

Verse 7. Note the powerful figure. What is it?

Verse 10. Notice the contrast obtained by this peaceful effect?

Verse 11. Does this effect of sea and water snakes come from magic, or is there anything in Nature which would cause it? Notice color beauty of descriptions and figures employed.

Verse 15. Why did the power of prayer come to him?

PART FIVE.

Verse 1. Who is "Mary Queen?"

Verse 2. Explain "silly," in the first line.

Verses 3 and 4. What do you think the reason for this change?

Verses 5, 6, 7 and 8. What do these verses describe? What does he mean by fire flags? Notice bold effective figure in 8.

Verses 10, 11 and 12. Explanation.

Verse 13. Is the word CORSES used now?

Verse 14. What do you think the sweet sounds were?

Verse 15. What was this singing? Is "jargoning" a good word? Why?

Verse 18. Notice the figure. Is it apt?

Verse 20. Has this Spirit been referred to before?

Verse 21. Is the Spirit responsible for this?

Verses 23 to 26. Explanation. What Spirit is referred to in 25? Isn't the same mentioned in 20?

PART SIX.

What are the two voices here, and what are they talking about?

Verse 2. Do you see any reason for speaking so of the moon and the ocean?

Verse 7. Last of the Penance.

Verse 9. Curse is finally expiated.

Verse 11. What is the figure? Is it a good illustration? What does he fear?

Verse 13. Do you think this breeze supernatural?

Verse 18. What does line 3 mean or suggest to you?

Verse 20. Notice effect of rhetorical question.

PART SEVEN.

Verses 4 and 5. What is the figure? Is it true to life?

Verse 8. Do you think this is caused by the Spirit?

Verse 12. Why the "Devil," line 6?

Verse 14. Who is speaking and what does he want?

Verses 16 and 17. What does this explain?

Verse 20. Why does he feel this way?

Verse 25. Why was he a sadder, wiser man?

GENERAL QUESTIONS.

Did Coleridge have any definite purpose when he wrote this poem? What was it?

For essay work take: A description of the mariner; of the storm, part 5, verses 5 to 9; of the bay in moonlight, part 6, verses 17 to 20; of the sea and water-snakes, part 4, verses 11 to 14; of the

night, part 3, 14; and of the icy region in part 1, verses 13, 14 and 15.

Learn verse 23, section 7.

QUESTION TYPES ON "QUENTIN DURWARD."

1. Quentin Durward is one of the Waverly novels. What does this mean?

2. Was this novel written before or after *Ivanhoe*?

3. Where did Scott get the [facts of history] data?

4. Be able to tell the salient points in the life of Sir Walter Scott.

5. Explain the term "feudalism."

6. Why was it a natural evolution?

7. What caused the downfall of the system?

8. Why was it that one of the king's vassals could acquire so much power?

9. Who was the Duke of Burgundy and what was his record?

10. Who was Louis XI. and what did he accomplish?

11. From your historical knowledge, write a character sketch of Louis XI., and as you read the story later see if Scott's interpretation of his character coincides with that of the historians.

12. Why is the novel called "Quentin Durward" rather than Louis XI., the most striking character by far?

STORY PROPER BEGINNING WITH CHAPTER B.

13. Why did Scott introduce the hero on a "delicious spring morning" rather than on a dark, storm-ridden night?

14. Why was it that Scott introduced the two countrymen to the reader during one of their churlish, surly and almost heartless moods rather than while they were feeling more friendly, as, for instance, an hour later in the inn?

15. What was the proverb which was to be broken?

16. What were the hunting and forestry laws which oppressed the common people; one of which laws Quentin Durward has transgressed?

17. Does the description of the woodland chapel remind you of any other similar description in Scott?

18. What do you think of the aptness of the figure "enlivening it (the "butcher's" face) as a passing meteor enlivens a winter sky?"

19. Was it consistent that a man who would let a stranger drown for lack of a friendly warning, should stop at a chapel thirty minutes later? What does it indicate right at the outset of the book?

21. After chapter 3 has been read in class, have the pupils (in

class) write from memory their impression of the castle front as seen by Quentin Durward for the first time.

22. Why did the Scots come to France?

23. Why did France welcome them?

24. How diffuse was learning even among the aristocracy of that age?

25. Why did not the author have Quentin choose between "the three trees upon which to be hanged" rather than have the choice of master made for him?

26. What other rider (in fiction) does the cardinal on horseback call to mind?

BOOK II.

27. Where do you think the turning point in the story comes?

28. How long a time do you think elapsed between Quentin's two exits from the castle?

29. Why did the king put himself in Charles' power?

30. Find out what you can of Heraldry.

31. What did you think of Hayraddin? Would you condemn him?

32. Why did the author send Quentin to rescue Gertrude instead of letting him kill the "Wild Boar of Ardennes" and thus truly win the prize himself?

33. Does it seem natural or only a literary device that La Balae should give up Isabel so willingly?

34. Whom in the whole book did you dislike most? Why?

35. Which characters stand out most vividly in your mind?

36. Contrast the characters of Louis, Charles and De la Mark.

37. Hunt out the scenes in which you liked the king and those in which you disliked the king; compare as to number and degree of intensity.

38. What in your opinion was the most dramatic scene?

39. How does this story compare in plot with *Ivanhoe*? Is it easier or more difficult to follow? Which maintains the most uniform interest?

40. Write a synopsis of the principal facts of the story.

SPEECH ON CONCILIATION.

Author's Life—

1. Give a sketch of Burke's life, touching at least upon the following points:

Date and place of birth and death.

Education.

Parentage.

Personal appearance.

Character.

Positions he held.

When first elected to Parliament.

How long in Parliament.

Kind of writings.

His attitude toward George III.

Relation to Lord Rockingham.

Association of names of Warren Hastings and Burke.

The three great subjects which engaged Burke's powers during his public career.

The honor Parliament paid him near the close of his life.

2. Was Burke elected to the cabinet? Why was this the case?
 4. Why is Burke called a statesman?
 5. State the social conditions of the time in which Burke lived.
 6. Describe the political conditions.
 7. Who were some of the leading English characters of that time?
 8. How is England governed? What two houses constitute Parliament?
 9. Who compose the House of Lords?
 10. How do members in House of Lords obtain their positions?
 11. Who is in the House of Commons?
 12. How do the people in the House of Commons obtain their positions?
 13. How long are positions in Parliament held?
 14. Which House was Burke in?
 15. Who presides in each House?
 16. How does one get permission to speak?
 17. What is meant by "having the floor"?
 18. When was the Speech of Conciliation written?
 19. What was the immediate occasion for it?
 20. What was going on in America at that time?
 21. Who were some of the leading American men at this time?
 22. What was the feeling existing between England and America?
 23. What position in Parliament did Burke hold in reference to the colonies?
 24. In the speech point out and show the importance of link words.
 25. Show the difference between direct proof and refutation.
 26. [To the Teacher]: Make an outline with the class.
1. 1. How did Burke address the chair at the beginning of his speech?
 2. Where had the grand penal bill been returned from?
 3. Why was this a favorable omen for Burke?

4. How does this first paragraph prove that the beginning of the speech at least was extemporaneous.
5. Was the greater part of the speech given extemporaneously or read?
6. State difference between COERCION and RESTRAINT.
2. 1. When did Burke first have the honor of a seat in Parliament?
2. Was Burke well informed about the colonies? How had he become so?
3. What did this studying prove in regard to Burke's real, sincere interest in the colonies?
4. What rhetorical feature is well brought out in next to the last sentence?
5. In the last sentence?
3. 1. What does Burke say in the paragraph in regard to his opinions?
4. 1. According to Burke, who has been the disturbing element—England or the colonies?
2. What has been the effect of the "so-called remedies"?
3. What were some of these "so-called remedies"?
4. Notice the politeness of the arraignment.
5. 1. Who was the "worthy member" spoken of?
2. By whom would the former methods be no longer tolerated?
3. How and why did the public tribunal fear Parliament would be criticised?
4. What figure of speech is there in this paragraph?
6. 1. What did Burke do as a result of this accusation?
2. What is meant by parliamentary form as used in this sentence?
3. What characteristic of Burke's is brought out in the last sentence?
7. 1. Explain what is meant by "paper gov."; by a "plan that is wholly separated from its execution"?
2. Quotation: "Public calamity is a mighty leveler."
3. What is Burke leading up to in this paragraph?
8. 1. Quotation: "You would not reject a reasonable proposition because it had nothing but its reason to recommend it."
2. Give meaning of ADVENTITIOUS.
3. Give the topic thought of this sentence.
4. This paragraph finishes the history of the discussion.
9. 1. What is the proposition?
2. Give Burke's definition of the peace.
3. How does Burke think this peace ought to be accomplished?
10. 1. Quotations: "Refined policy ever has been the parents of confusion; and ever will be so as long as the world endures."

"Plain good intention, which is as easily discovered at the first view, as fraud is surely detected at last, is, let me say, of no mean force in the government of mankind."

"Genuine simplicity of heart is a healing and cementing principle."

2. Who is meant by the "noble lord in the blue riband"?
3. What project had he brought forth?
4. Why was he called the lord of the blue riband?
5. Explain the reference to colony agents.
6. What does Burke say about his plan?
7. Where is the irony in this paragraph?
11. 1. What advantage has Burke gained for his speech through Lord North's?
12. 1. Define REPREHENSIBLE.
2. Show Burke's skill in making further use of Lord North's speech?
13. 1. Quotation: "The superior power may offer peace with honor and safety."
2. What great principle lies at the bottom of both speeches?
3. What part of the speech does the paragraph conclude?
4. What speech privilege has England in being the greater power?
14. 1. What are the two capital questions?
2. Why, according to Burke, should the subject of America be pondered and discussed?
15. 1. What is said about the population?
2. Why doesn't it matter if these figures are too low?
16. 1. What does the question of population of the colonies have to do with conciliation?
17. 1. What other important factor is to be discussed?
2. Point out and name at least one figure in this paragraph.
3. Who is the person mentioned?
4. Explain: AT YOUR BAR.
18. 1. Why doesn't the giving of the other speech keep Burke from giving his?
2. Show the skill with which Burke aims to get the interest of those listening.
19. 1. What are the two accounts.
20. 1. What are the three great branches of export to the colonies?
2. Why may they be called one?
23. 1. Compare the two sets of statistics given.
2. What is the purpose of the statistics given in this paragraph?
24. 1. What startling statement does Burke make at the beginning of this paragraph?

2. Find a figure of speech, name it and show its connection to the rest of the paragraph.
25. 1. What is the Biblical allusion in this paragraph?
2. Compare the third sentence with Addison's couplet:
 "The Wide th' unbounded Prospect lies before me.
 And shadows, clouds and darkness rest upon it."
3. Tell something about Lord Bathurst.
4. What bearing has this paragraph on the speech?
27. 1. "Truth is stranger than fiction." How can you apply this saying to the example given in this paragraph?
28. 1. What kind of a paragraph is this?
29. 1. What have you learned in this paragraph with regard to the agriculture of the colonies?
30. 1. Where are Hudson's Bay and Davis's Straits?
2. Define ANTIPODES; frozen serpent—explain.
3. Locate Falkland Island. Explain the reference made to it.
4. What does Burke say in regard to the fisheries?
5. Why has this wonderful advance been possible?
31. 1. Explain meaning of complexions.
2. What will probably be admitted now since America has been described thus?
3. Who thinks force is advisable? Who thinks the opposite?
4. What does the phrase "Wield the thunder of the state" mean? What classical allusion is in this?
- 32-35. 1. Give the thought of each paragraph and explain its relation to the statement that "force is not a good way to win the colonies."
36. 1. What kind of a paragraph is this?
2. What is Burke going to discuss next?
3. Show the relation of this topic to the speech.
37. 1. Define CHICANE, RESTIVE.
- 38-53. 1. State from these paragraphs the causes of the spirit of freedom in the colonies.
2. Why is the spirit of freedom particularly strong in the colonies?
39. 1. Define use of POPULAR.
2. How would a popular government tend to strengthen the spirit of freedom?
40. 1. Show how Protestantism affects the spirit of liberty.
41. 1. What is there in the South to more than counterbalance the lack of Protestantism?
2. Why are people who are masters of slaves more proud of their freedom than others?

42.
 1. Who was Gen. Gage? Tell some incident about him. What incident is referred to here?
 2. What effect does a general study of law have on a people?
 3. Name the adjectives which Burke uses in this paragraph. What characterizes the use of all of them?
 4. Who is the "honorable friend referred to?"
 5. Do you find many Latin quotations in modern works?
 6. What can you infer then as to the use and knowledge of Latin?
43.
 1. What is the last cause for this spirit?
 2. How is this a real cause?
 3. What is the Biblical reference?
 4. Locate places named.
 5. Explain the classical allusion in "winged messengers of vengeance."
44.
 1. Characterize paragraph 44.
 2. What are the six capital sources?
45.
 1. Compare the length of this paragraph with 44.
 2. Who is Lord Dunmore?
 3. If the spirit exists, what must the English do?
 4. What has America done in regard to self-government?
 5. What is likely to be a most evil effect of this?
46.
 1. To illustrate, what does Burke use Mass as an example of? Show the application.
 2. How do the people at home suffer through the persecuting of the spirit of liberty abroad?
47.
 1. Find and name a figure of speech.
 2. Point out some characteristic of Burke's as shown in this paragraph.
 3. Show his keen understanding of human nature.
 4. In what three ways can this spirit be treated?
48.
 1. Name the kind of paragraph.
- 49-50.
 1. Why isn't the scheme to make no more grants a good one?
 2. What is meant by English charters?
 3. What Biblical phrases are used? What books are they taken from?
 4. State the topic-thought of these two paragraphs.
51.
 1. What is this paragraph?
52.
 1. What does Burke say about the plan of impoverishing the colonies?
 2. Point out the sarcasm in this speech.
53.
 1. What thought is summed up in 53.
54.
 1. Can their religion be changed? Why not?
55.
 1. What are the difficulties in regard to freeing the slaves?

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56. 1. Quotation: "Dull as all men are from slavery."
2. Point out an example of irony and of humor in this paragraph.
3. What kind of a paragraph is this rhetorically?
4. Locate Guinea.
5. What was the custom for English ship owners in regard to slaves?
6. Were there slaves in England at this time?
7. How did it happen, then, that there were slaves in America?
57. 1. What physical cause would remain even if all the others were removed?
2. What is the rhetorical effect of this paragraph?
58. 1. What kind of a paragraph?
2. Point out the suspension.
59. 1. Explain the reference to Sir Edward Coke.
2. What rhetorical figure is used?
3. What is the important thought in this paragraph.
60. 1. Give Burke's definition of an Empire.
2. Notice correct use of word NICE.
3. What good arguments does Burke give in reference to the supreme authority?
4. Point out the oratorical effect in this paragraph; the ironical.
61. 1. Quotation: "Men are, every now and then, put, by the complexion of human affairs, into strange situations; but justice is the same, let the judge be in what situation he will."
2. What would be some of the difficulties in a criminal proceeding?
3. For what is Burke arguing in this paragraph?
62. 1. To what does WHICH refer?
2. What was the law of Henry VIII. mentioned here?
3. What has been England's method in treating the colonies?
4. Show the inconsistency which Burke wished to point out?
5. What does Burke say in regard to abstract right and concrete right?
63. 1. What were some of the menaces? The penal laws?
2. Who had been sent to America with a FORCE?
3. Show Burke's skill as a speaker in the last part of this paragraph.
4. What does CORRECTLY mean as used here?
5. Point out the careful diction used.
64. 1. What kind of a paragraph is this?
2. What is the conclusion Burke reaches?
3. What rhetorical figure is made use of?

65. 1. What must England do in regard to concession?
66. 1. What does Burke say he will put out of the question?
2. Show sarcasm.
3. What unusual word does Burke use?
4. Show the humor.
5. From what is the quotation taken?
6. Tell something about "Paradise Lost" and "Paradise Regained."
7. How does Burke state the question?
8. What is Burke trying to do in this paragraph?
67. 1. What kind of a paragraph is this?
2. What does Burke now state positively?
68. 1. What words are in direct contrast?
2. What is Burke's idea?
3. How is that idea to be carried out?
69. 1. What side of the situation is set forth in this paragraph?
70. 1. What is Burke trying to prove?
2. Whom does Burke mean by AMERICAN FINANCIERS?
3. Why do some in Parliament object to concession in regard to taxation?
3. Show how the old saying, "Give an inch and he will take an ell," might be applied here.
4. What were the chief trade laws?
71. 1. Under what restraints in trade was America?
2. What kind of a sentence is this, grammatically?
72. 1. What is the rhetorical effect of this paragraph?
2. How many sentences are there in it?
3. What rhetorical figure is used?
4. What point has Burke made?
73. 1. What pamphlet is referred to?
2. Explain the construction of this paragraph, showing how one sentence follows from another.
74. 1. What is the topic sentence of this paragraph?
2. What good point does Burke make here?
3. Show an example of irony.
4. Explain the last sentence.
75. 1. What kind of a paragraph is this rhetorically?
2. How is this effect gained?
3. What argument is Burke making?
76. 1. What is this paragraph for?
77. 1. What is Burke leading up to?
78. 1. Who was Phillip II.? Tell something about him.
2. How was he connected with England?

3. What compliment does Burke pay to the English constitution?
 4. Tell about the Armada.
 5. What was the relation between Phillip II. and Queen Elizabeth?
 6. What is the contrast in thought in this paragraph?
 7. What four examples does Burke give?
79. 1. Locate the four examples, Chester, etc.
2. Tell something about the Magna Charter; what it was, its purpose, and what it accomplished.
3. What figure is used?
4. Tell briefly the history of Ireland.
5. Who was Sir John Davis?
6. What really conquered Ireland?
7. Show how the example of Ireland applies to Burke's argument.
8. Explain: All Ireland; vain projects; changed the people; altered religion; deposed kings; altered succession; usurpation; restoration; revolution.
80. 1. Who were Henry III. and Edward I.?
2. Who were the lords marchers?
3. Explain the meaning of word GENIUS as used here.
4. What conditions existed in Wales?
81. 1. How did England treat these conditions?
2. How does Burke refute a supposed argument?
3. What is meant by "rid this kingdom like an incubus"?
82. 1. What was the result of this treatment?
83. 1. Quotation: "The march of the human mind is slow."
2. From what verse in the Bible is the word day-star taken?
3. What point does Burke make in this paragraph?
84. 1. How were Wales and Chester alike?
2. Who was Richard II.?
85. 1. Tell about the petition; who sent it, what it was, why it was sent, what it accomplished.
86. 1. What rhetorical figure does Burke make use of?
2. What figure is used?
3. Who was Charles II.?
4. How is this example like that of Chester?
88. 1. Show the application of the argument.
2. Who was Henry VIII.?
3. What was the preamble of the act mentioned?
4. How is a point in debate made?
5. Does Burke here do what is necessary to make one?
89. 1. Give the meaning of "Opposuit Natura."
2. What connection has the thought of this with the paragraph?

3. Quotation: "However, the arm of public benevolence is not shortened; and there are often several means to the same end."
4. Where is the Biblical allusion in this paragraph?
90.
 1. What important point is Burke making in 89-90.
 2. Tell something about: The republic of Plato; the Utopia of More; the Oceana of Harrington.
 3. The phrase "rude swain" is similar to a phrase in what piece of literature? Tell about this piece of literature.
91.
 1. How is satisfaction to be given without granting representation in Parliament?
 2. What does BY GRANT mean?
 3. What acknowledgments are to be made?
92.
 1. What figure is there here?
 2. How does Burke state his resolutions—that is, what does he say they are?
 3. What effect should they have?
93.
 1. What is the first resolution?
94.
 1. What is the second?
 2. Point out a Biblical phrase.
95.
 1. Note the Biblical language.
 2. What does the quotation mean?
 3. What figure is used?
 4. What purpose does this paragraph serve?
96.
 1. What method used in argumentation does Burke make use of here?
 2. How does he defend the "language" used?
 3. Who was George II.? Lord Hillsborough?
97.
 1. What is the third proposition?
98.
 1. What is the fourth?
99.
 1. What does paragraph 99 do for the 4th?
100.
 1. What is the fifth resolution?
 2. What were the Indian wars referred to?
- 101-104.
 1. What thought do these paragraphs sustain?
105.
 1. Show the proof in this paragraph.
106.
 1. Point out and name the rhetorical figure.
 2. What thought is summed up?
107.
 1. What is the sixth resolution.
108.
 1. What is the question now?
 2. Name the kind of this sentence in its grammatical use.
- 109-132.
 1. What are the reasons for repeal given in these paragraphs?
 2. How does a bill become a law?

3. Explain: Clandestine running, as used here.
110.
 1. What was the Boston Port Bill?
 2. Why should it be repealed?
111.
 1. Point out an example of irony.
 2. In what way did England have less power in Connecticut and Rhode Island than in Massachusetts?
112.
 1. Why was the act concerning trial only temporary?
 2. Why should this act be done away with?
113.
 1. What was the act of Henry VIII. for the trial of treason?
 2. What ought to be done with it? Why?
- 114-117.
 1. What are the three resolutions given?
- 118-121.
 1. What kind of a paragraph is 118?
 2. Why does Burke continue?
 3. What reasons are given that the statement "the grievance extends to all legislation" cannot stand?
122.
 1. What is the topic sentence of this paragraph?
- 123-132.
 1. "The foregoing plan of satisfying the American colonies is better than Lord North's." State reasons given in these paragraphs to substantiate this.
- 133-140.
 1. What is meant by "Power of Refusal."
 2. Show the importance Burke places upon it.
134.
 1. How will the existence of parties in America effect this?
- 135-136.
 1. What chief thought does Burke bring out in this paragraph?
- 137-138.
 1. What are the real ties that bind the colonies to the Empire?
139.
 1. Find a single sentence that expresses the thought.
- 140-155. Resolutions.

GENERAL QUESTIONS ON SILAS MARNER.

1. About what time did George Eliot live?
2. At what time is the scene of this story laid?
3. Characterize the general setting.
4. Is it practically the same throughout?
5. Make an outline of the main incidents of the plot and show the growth of the story.
6. With the life of Marner as the main thread, make a diagram of the plot, showing the influence that William Dane, Dunstan, Godfrey, Dolly Winthrop and Eppie have on his life.
7. What is the sub-plot?
8. Give the main incidents of the sub-plot and show how and where it is connected with the main story.
9. Where does the climax occur?

10. Why is this the vital moment?
11. When does the catastrophe take place?
12. Are there other points of real suspense?
13. Does the chief interest center in Marner? Defend your answer.
14. Which is most important, plot, setting, or character portrayal?
15. As you read, make a list of unusual words and expressions. What is the usual meaning and how different here?
16. Choose what you consider the dramatic incidents in the story. Give your reasons for the choice and tell how each influences the thread of the story.
16. Make a list of the customs that seem peculiar to the time of which George Eliot was writing.
17. Do you gain a clear idea of English country life from these?
18. Which seems the most unusual? Why?
19. What part does superstition play in the story?
20. Does it have any vital influence on the life of any character?
21. Does it ever seem to mold events otherwise than would be expected?
22. Are any of the same superstitions beliefs in existence today?
23. Do the characters seem like real people?
24. There are three methods of character building: Author's comment, character's own words and actions, and words of others. How does George Eliot build up the following characters: Nancy, Godfrey, Eppie, Marner, Dolly, Priscilla, Mr. Macey, Dr. Kimble.
25. Outline the characters of Nancy, Eppie, Marner, Dolly, Priscilla and Godfrey.
26. Marner's character changes radically. Show when and through whose influence.
27. What characters show real growth?
28. Does the author ever make much of the influence of one person upon another? Show where and how.
29. Does environment ever apparently force a person to do something unexpected?
30. Are the characters grouped?
31. If so, how should you divide them?
32. Are there any scenes so clearly described that they appear as finished pictures? Where?
33. What is the peculiar significance of such words as *distrain*, *mawkin*, *springe*, *colly*?
34. Do such words exist today?
35. Why did George Eliot use such colloquial expressions? Choose six good quotations.

SILAS MARNER.

CHAPTER I.

1. How do you like the introduction? The first paragraph?

2. Does George Eliot introduce Marner effectively?
3. How does the account of his life at Lantern Yard affect your opinion of him?
4. What kind of a man was William Dane?
5. What part does the casting of lots play in the story?
6. What must have been Silas's nature to have this misfortune affect him so deeply?

CHAPTER II.

1. What was the difference between the church at Raveloe and the one at Lantern Yard?
2. What shows George Eliot's close study of human nature?
3. When is the beginning of Silas's habit shown?
4. What cuts off his one means of getting in sympathy with his neighbors?
5. Is it good to have the growth of habit so clearly traced?
6. Is Marner's love of money, as portrayed in this chapter, repulsive or merely pitiful?

CHAPTER III.

1. What picture of country life is given?
2. Are the Squire's sons well portrayed?
3. How much of the story is told by conversation between Dunstan and Godfrey?
4. Outline Godfrey's character. What do you think of him? Does his conversation bear out what the author says of him?
5. How is Nancy's character delineated?
6. Has any element of sub-plot entered in this chapter? What is it?

CHAPTER IV.

1. How do you consider the horse trade a literary production? Have you read anything else like it?
2. What is shown of Dunstan's character?
3. Do you like the ending of this chapter? What does it foreshadow for you?

CHAPTER V.

1. What is learned of the character of Marner?
2. Does he take the loss of his gold as you expect?
3. Is Marner's search for the gold natural?
4. Why did he not think of a thief at once?

CHAPTER VI.

1. What do you get from the conversation in this chapter?
2. Are these minor characters real people?

CHAPTER VII.

1. Is Marner's entrance well prepared for?

2. Is the attitude of villagers natural?
3. Are their actions to be expected?

CHAPTER VIII.

1. Is the gossip about Silas's loss true to life?
2. What do you think of the surmises concerning the pedler?
Is there any real evidence?
3. What more do we learn about the Cass family?

CHAPTER IX.

1. What insight into the Squire's character does this chapter give?
2. Is the sub-plot advanced?
3. What element of country life is shown?
4. What is the sole amusement of the gentry?
5. Does this chapter show some good in Godfrey?

CHAPTER X.

1. Why does Dunstan's absence excite little interest?
2. What part does superstition now play?
3. Is Silas's sense of loss well portrayed?
4. How does the misfortune affect his relation with his neighbors?
5. What element seems most prominent in Mr. Macey's character?
6. How much of Mrs. Winthrop's character is gained from the author's comment and how much from her own conversation?
7. How does Dolly's theology affect Silas?
8. What part does Adam play in the story now?
9. How does the author use nature to deepen Silas's depression?
10. Describe the Christmas customs at Raveloe.

CHAPTER XI.

1. Does the ceremony with which Nancy greets her aunt seem in harmony with the story?
2. What do you learn of Nancy?
3. How are Nancy and Priscilla contrasted?
4. Mrs. Crackenthorp makes subdued noises very much like a guinea pig. What other details of this kind have you noticed?
5. Does the Squire help on the story by his remarks to Godfrey?
6. What is apparently Godfrey's attitude toward Nancy?

CHAPTER XII.

1. Is the transition from Chapter XI. to Chapter XII. good?
2. What effect does the little George Eliot tells of Molly have?
Do you pity her or Godfrey?
3. What is the force of the simple episode of the child's finding the fire?
4. Is Marner's seizure made natural?

CHAPTER XIII.

1. Is Silas's refusal to part with the child to be expected after the account of his finding her?
2. How does George Eliot foreshadow the end of the story?
3. How does Godfrey feel when he is sure there is no danger of discovery?
4. What is the force of the following sentence where it is used: "The prevarication and white lies which a mind that keeps itself ambitiously pure is as uneasy under as a great artist under the false touches that no eye detects but his own, are woven as lightly as mere trimmings when once the actions have become a lie"?

CHAPTER XIV.

1. What is the value of this chapter.
2. What do you think of Dolly's philosophy?
3. What does the last paragraph do for the chapter?

CHAPTER XV.

1. Does this chapter help carry on the story?

CHAPTER XVI.

1. Are the changes due to the lapse of sixteen years what you expected?
2. Has there been any preparation for the change in Silas?
3. Considering her surroundings, is Eppie's growth rather remarkable?
4. What does the account of Silas's and Dolly's discussion of Lantern Yard do for the story?
5. Does Adam's love for Eppie serve to complicate or settle the story?
6. What little incident is barely noted in this chapter that helps the later development?

CHAPTER XVII.

1. Has the development of Nancy's character been natural?
2. Does Priscilla still serve as a foil for Nancy?
3. What law of human nature does George Eliot attempt to work out in this chapter?

CHAPTER XVIII.

1. Have you been prepared for discovery that Dunstan was the thief?
2. Does Nancy take Godfrey's confession as you expect?

CHAPTER XIX.

1. Does this chapter show the influence of environment on character?
2. Is the incident natural?

3. What now is the relation of plot and sub-plot?
4. Does Godfrey act natural?

CHAPTER XX.

1. What is the purpose of this chapter?

CHAPTER XXI.

1. Is Silas's desire to return to Lantern Yard natural?

CONCLUSION.

1. Does the conclusion round out the story naturally?
2. Has the sub-plot been ended before?

SECOND BUNKER HILL SPEECH.

1. When did Webster live?
2. With what events in American history was his life closely connected?
3. Where was most of his speaking done?
4. With what other orator is his name usually linked?
5. When and on what occasion was this speech delivered?
6. When was the battle fought?
7. Was it the first battle of the war?
8. Who was the American leader?
9. Did any noted American lose his life there?
10. Select words that seemed used peculiarly. What is their usual meaning? How different here?
11. Select twenty-five epithets that seem especially apt. Wherein does the force of each lie?
12. How many figures do you find? What kind of figures?
13. What compensates for the scarcity of figures?
14. Is there much figurative language?
15. How are the long sentences in paragraphs 27 and 53 constructed?
16. Are these the only long sentences? Why so few?
17. How is unity kept in the many series of short sentences? Quote some examples.
18. Select transition paragraphs. Are there any transition sentences or phrases that seem especially apt?
19. Have you noticed any coordinating conjunctions that do not seem properly placed?
20. Does the use of repetition ever become monotonous?
21. What is the chief value of repetition; force or coherence?
22. Is there ever monotony of sentence structure?
23. How is this prevented?
24. What is the effect of the personification of the monument in paragraph 9?
25. What does the piling of details in paragraph 39 accomplish?

26. How are paragraphs 11, 24, 26, 27, 28 and 32 developed?
27. Does the development of each contribute especially to the effect to be obtained?
28. The body of the oration begins with paragraph 18. Outline the introduction.
29. Outline the oration proper.
30. What part does the history of colonization have in the oration?
31. What is the force of the comparison of the colonies of Spain and England?
32. What three great differences were there between the colonies of the two countries?
33. How do these differences influence the development of the colonies as separate nations?
34. What is America's obligation to England?
35. How is she paying her debt?
36. In what does the final appeal of the oration consist?
37. Does it accomplish its purpose?

QUOTATIONS.

Paragraph 8.—“We may praise what we cannot equal, and celebrate actions which we were not born to perform.”

Paragraph 26.—“Knowledge is the only fountain, both of the love and the principles of human liberty.”

Paragraph 56.—“It is only religion and morals, and knowledge, that can make men respectable and happy under any form of government.”

“No government is respectable which is not just.”

LORNA DOONE.

GENERAL FORM OF THE NARRATION.

Lorna Doone is a romance, as it deals with scenes more striking than those of every-day life; with scenes of adventure full of unusual incidents. Through the medium of the characters, the elemental passions of love and self-sacrifice and even of revenge and hatred are portrayed. For instance, the love between “Greet Jan” and the child of Doone Glen is ideal and becomes absolutely intense. This is made manifest many times by peculiar touches of the writer, as when he made John swim in his best clothes to London Bridge as an outlet to his feelings when he discovered that Lorna still loved him (607). Again, note the strange psychological state into which the man was thrown at the apparent death of his bride—a state which caused him to notice at this tragic moment that the lilacs were in bloom and were beautiful (673). If Carver Doone, with his “vile oaths” (674), his “low, disdainful laugh,” and his “sullen and black scowl” (657), does not represent the opposite passion, hatred, fiction has failed to furnish any who does.

The book is long, minute in detail and melodramatic, but intensely alive. Perhaps the wild adventures never could have happened, but we have, while reading, absolute confidence in them, for real life is put before us. The robber dens and the deep-dyed villains do not seem impossible to us, especially as they are made to live in a time when history chronicles events even more decidedly startling.

We cannot consider Lorna Doone as historically true, but there are many elements of truth in it. Many of the outrages attributed to the Doones actually took place. Tom Fagus was all too real a character, and the trick of the "Majesty's Commission" (Chap. 39) is verified by reliable tradition. The general contour of the country is just as Blackmore describes it. However, he has sometimes allowed a little for shrinkage in the reader's mind. Thus the travelers are doomed to disappointment who so enthusiastically visit the famous water slide (Chap. VII.), where the mind of little John Ridd measured the hedge of rock as five hundred yards in height, "and no place to set a foot in." In spite of this, there is an atmosphere of truth throughout and such passages as the following, which lay claim to great accuracy, often impose upon our credulity. (See 379, 537.)

In addition to this truth of incident and description, the author has depicted accurately the names of life in the seventeenth century. The following list may suggest the extent of this information:

- The ways of the merchant, page 99.
- Methods of travel, Chap. 24.
- Mail service, 561, 699.
- Law procedures, Chap. 24, 25.
- Chancery, 467, 656.
- Agriculture, Chap. 29.
- Attitude toward soldiers, 319.
- General character of Exmoor peasants, 459, 499.
- London—city life, 187.
- Home life in the country (passages too numerous to cite).
- Contrast of city and country life, 217, 599.
- Buying of pardons, 497, 506.
- Superstitions of the times, 138, 250, 258, 354, 377, 451, 463. (Note the foundation of John's superstitions, 519).
- The English idea of a gentleman, 281, 545, 602, 633.
- Political parties, 285.

STYLE.

Blackmore's style exhibits a quaint simplicity, admirably suited to the portrayal of Exmoor scenes and characters. The texture is close, the composition elaborate, but there is an unconscious rhythm throughout which is delightfully musical. The humorous passages crop out in most unexpected places, and I find them never obtrusive, but well adapted to the simple characters who express them. The

following pages all contribute to the continual amusement of the reader: 2, 35, 78, 106, 107, 137, 372, 378, 413, 448, 472, 545, 548, 564, 571, 600, 630, 631, 656. However, I think the author is often unconsciously funny, especially when he makes those sudden drops from lofty sentiment and contemplation of nature to the most trivial occupations of life. For instance, note—

376, Sentiment to "cats."

632, Scenery to "cats."

671, Sentiment to pigs.

681, Sentiment to beer drinking.

We are not only entertained constantly by humorous turns, but are impressed by the moral vigor, by the fine and often beautiful thoughts. See 89, 126, 390, 606, 632, 633, 644. Blackmore also weaves into his story many a sly dig aimed at the foibles of mankind, not unkind ones by any means, but those that a good-natured twinkle of the eye might accompany. See 546, 565, 601, 605, 622, 625, 683.

The impressive thoughts of the author are often made wonderfully clear, though not always more beautiful, by the use of figures. Similes and analogy are the favorite ones. These are drawn almost entirely from country life, the farm yard, the fields, the woods, the village. In fact, they are just the ones a simple rustic like John might use. 70, 87, 94, 109, 110, 137, etc. Personification is perhaps almost as common as the similes for a man, with the passion of John Ridd, for nature is determined to breathe into it a personality (see Chap. 17). The fields are his friends and "nature a dumb and loving motherhood."

MOVEMENT.

The method of securing continuity of movement is almost entirely the simple chronological one. Cause and effect are little considered, neither are there any dramatic devices of alteration to secure attention. All is related in the order of occurrence.

The rate of movement is, in general, slow, because of the weight of detail carried throughout. Every feature of the country is mapped out for us, and not an incident can be omitted. He even digresses from his digressions, that no fact may escape us. Before John can ride to see Annie, we must understand the exact nature of the beast he rode on, the condition of the fields he passed through, the heaviness and quality of the harvest the preceding year, etc. (Chap. 50).

That the author was a remarkably keen observer of nature is seen in such passages as these: 133, 329, 341.

Of course, all this is bound to encumber the story, but we seem to bear the burden of it all, gladly, for it is so full of the truest nature and the loveliest thoughts that, without them, the whole would lose its harmony. Even where the action seems intense and our interest is at white heat, the impression is caused rather by vigor than by

rapidity of movement. To hold our attention, the author resorts largely to contrast, not only of calm and stormy scenes, but contrasts of places and people. (Note contrast between Glen Doone and Plovers Barrows, between London and Exmoor, between the plain, honest Ridds and the ancestored Doone robbers.)

In the following lists R stands for rapid movement and S for slow. Where no letter follows, the movement is neither decidedly the one nor the other.

INCIDENTS WOVEN TOGETHER TO FORM PLOT.

Chap. III. Incidents of the well, the coach, and the fright from the Doones.

- IV. Visit of Mrs. Ridd to Glene Doone. R.
- VII. Climb of the water slides. (Note the vigor of description rather than rapid movement.)
- VIII. First meeting of Lorna and John. R.
- XIII. Robbing of Uncle Ben by Doones.
- XVI. Second meeting of Lorna and John. R.
- IX. Meeting in Lorna's bower.
- X. The appearance of Jeremy Stickles.
- XXVI. Interview with Judge Jeffreys.
- XXIX. First assurance of Lorna's love.
- XXXII. John's discovery that Lorna is watched and restrained. S.
- XXXIII. Meeting in which Lorna declares her love. R.
- XXXV. Exchange of rings. S.
- XXXVI. John's careful survey of Glen Doone. S.
- XXXVII. Visit to Lorna's house. R.
- XXXVIII. Saving of Stickles's life. R.
- XL. Visit to Sir Ensor's death bed. R.
- XLIII. Discovery of Lorna's captivity. R.
- XLIV. Lorna carried to Plovers Barrows. R.
- XLVI. Tom Fagus shows value of Lorna's necklace. S.
- XLVIII. Chase of Stickles by Doone. R.
- XLVIII. Carver frightens Lorna. R.
- XLIX. Doone's attack Plovers Barrows. R.
- LI. Counsellor tells a disturbing lie. R.
- LIII. Stickles learns Lorna's history. R.
- LIV. John attacks Glen Doone and is defeated. R.
- LV. Messengers appear with letters for Lorna. S.
- LVI. Visit of John to Lorna's old nurse. S.
- LVII. Lorna meets and knows her nurse. S.
- LIX. John discovers Lorna's absence. S.
- LXV. John falls into rebel hands. R.
- LXVI. John gets a note from Lorna in London. S.
- LXVII. John visits Lorna.
- LXIX. The Doones attack Mistress Badcock. R.

- LXXI. The Doones are blotted out. R.
 LXXII. Counsellor gives up necklace. S.
 LXXIII. Lorna returns to Plovers Barrows.
 LXXIV. Marriage of Lorna and John.
 Lorna shot. R.
 Cawes killed. R.
 John wounded. R.
 LXXV. Ruth brings Lorna to life.
 John recovers.

EPISODES.

- II. The schoolboy fight.
 X. Rescue of the drake. R.
 The rides on Winnie. R.
 XVIII. Interview with Mother Meldrum. S.
 XXXI. John Frye at Wizard's Slough.
 XXXIX. Tom Fagus's trick. R.
 XLII. The great snow and the buried sheep. S.
 L. The visit of John to Ruth. S.
 LII. Counsellor steals the necklace. R.
 LVIII. John visits uncle's mine. S.
 LIX. Gwenny finds a father. S.
 LX. John visits Annie at her new home. S.
 LXI. Ruth's arm is hurt. S.
 LXII. King's death.
 LXIII. Annie visits counsellor. R.
 LXV. John rescues Tom. R.
 LXVIII. John captures the robbers and is knighted. R.

REMAINING CHAPTERS.

- I. Introduction. S. .
 V. Discussive. S.
 VI. Discussive. S.
 IX. Discussive. S.
 XI. Dialogue. S.
 XII. Discussive. S.
 XIV. Dialogue. S.
 XV. Dialogue and description. S.
 XVII. Discussive and description. S.
 XX. Discussive. S.
 XXI. Discussive. S.
 XXII. Discussive and descriptive. S.
 XXIV. Discussive and descriptive. S.
 XXV. Dialogue. S.
 XXVIII. Description. S. .
 XXIX. Description. S.
 XXX. Dialogue. S.

- XLI. Descriptive and discussive. S.
XLV. Discussive. S.
LXIV. Discussive. S.
LXX. Discussive. S.

DRAMATIC SITUATIONS.

Pages 298, 332, 369, 403, 419, 477, 624, 672.

Where the action is slow, the sentences are usually long. See page 483. When rapid, they are usually short. See Chap. 37.

MEDIUM CHARACTERS.

Blackmore has a faculty of introducing the most unique characters and clothing them with such individualities that they are not mere abstractions, but are living, breathing people. Moreover, they seem just as much a part of the Exmoor world as do the fields, rivers and heaths. That is, each has his place in the landscape, and, without him, nature would seem out of harmony. It is in John Ridd that the interest centers. The passages which I have cited to show the style of Blackmore, all go to show that the Exmoor hero was possessed of a sense of humor, and of close insight into the moods of people and nature. His extremely simple honesty crops out in these passages: 199, 212, 332, 387, 474, 547, 586. That he was not lacking in masculine conceit, is also quite plain. See 100, 101, 242, 427. He was slightly credulous (523), decidedly simple (547, 628, 629), certainly not profane (521). His great love of animals and his brave resourcefulness are manifest throughout the book, in places too numerous to mention. He read but little and yet exhibited shrewd insight in his reading of Shakespeare (422). His heart was almost too big to permit a convenient passage through this world (24, 419, 423, 585). We never tire of the plodding ways of this big, sturdy fellow, but are interested in his wrestling, his farming, his leading of men, and his wild adventures.

Some of the minor characters of this book are almost equally strong. The incident of the drake rescuing, which introduces us to Tom Fagus, might be considered, typical of the scenes in which this reckless, good-natured, intemperate, well-meaning man figures. Jeremy Stickles, Farmer Snowe, the counsellor, the parson and John Frye are each possessed of a combination of characteristics extremely unique. I did not fall in love, however, with any of the feminine creations. This I would not feel called upon to communicate to a high school class, but I should state that these do not show Blackmore's greatest skill. Lorna is too perfect, and too apt to become unconscious when life seemed strenuous. Annie is too simple, Lizzie too disagreeable, the mother too scatter-brained and every one of them decidedly too prone to tears. Hoards of minor characters such as the devout Catholic, the cruel captain, the Lord Chief Justice, etc., walk through these pages and, although of some we get only a glimpse, yet the face and characteristic features of each is left impressed upon our memory.

DESCRIPTION.

Description so predominates in this story, that the plot is often lost sight of. Perhaps it is well that this is true, for the plot is hardly worth looking at, while the description certainly gives evidence of a master hand. Note:

- The climb; chap. 8.
- Lorna's bower; 146.
- The home-coming; chap. 27.
- Wizard's Slough; 252.
- The harvest; chap. 29.
- The sunrise; 266.
- The great thaw; chap. 45.

SETTING.

Place: Exmoor (Chap. 1).

Time: Reign of Charles II. (Chap. 2).

Written by John Ridd in reign of Queen Anne (Chap. 24).

SOHRAB AND RUSTUM.

(By Matthew Arnold.)

QUESTIONS ON INCIDENTS.

1. Give a short account of the incidents related.
2. What does Sir John Malcolm's History of Persia say in regard to the meeting of Sohrab and Rustum?
3. How many encounters of these two warriors are mentioned in the poem?
4. What happened in the first encounter?
5. Why did Sohrab show such mercy to Rustum?
6. What made him think his opponent was his father?
7. Why was Rustum so merciless?
8. How did the contest end?
9. Why was Sohrab so easily defeated?
10. Describe the scene of the combat.
11. Locate on a map as many as possible of the places mentioned.
12. Describe the Tartar army.
13. Why did Sohrab's mother say her child was a girl?
14. How did Sohrab prove his identity to Rustum?

MORE INFERENCES.

1. Give a short description of the scene of the story.
2. Mention some of the characteristics of Sohrab and tell whether you consider him an admirable character or not.
3. Mention some of the characteristics of Rustum, and tell which characteristics you admire and which you repudiate.

SETTING AND SITUATION.

1. Over what time do the incidents extend?

2. What is the location of the story?
3. About when did these related events occur?

GENERAL.

1. What purpose is served by the conversation of Sohrab and Rustum?

2. Does this conversation render the story more interesting?
3. Mention some of the characters of the story other than Sohrab and Rustum, and tell of what use they are to the story.
4. Select some of the words that give a vivid picture of the scene.

Give an account of Arnold's life.

Mention some of his works.

Mention some of the works of Edwin Arnold.

POEM. — GENERAL QUESTIONS.

What sort of poem is this called?

What is "blank verse"?

Why is it not divided into stanzas?

Is the diction simple or ornate?

Mark the syllables of the fourth and fifth lines according to the conventional way of marking the quantity of syllables.

How many feet are in a line? On which syllable does the accent fall?

Find some irregular lines.

What figure of speech predominates in the poem?

Select all the figures of speech in the poem and tell if they are appropriate or not.

A STUDY OF JULIUS CAESAR.

I.—AGE OF SHAKESPEARE.

1. Renaissance and Reformation, 1500-1600.
 - a. Renaissance—intellectual awakening—revival of classical learning to the modern world the riches of modern thought.
 - b. Reformation—spiritual awakening—religion was present as an impelling form. Modern drama rose out of religion. Mysteries and miracle plays were given as well as moralities and interludes.
2. Three main streams of literary development. Prose, Poetry and the Drama. First comedy was produced about 1500. First tragedy was acted 1561. Age was dramatic and called for dramatic presentation of life.

II.—LIFE OF SHAKESPEARE.

1. When and where born?
2. Tell something of his schooling.
3. Four stages of his career.

- I. Actor.
 - II. Revises of old plays for the stage.
 - III. Original playwright.
 - IV. Theatrical manager and owner.
4. His writing.—Three divisions:
- I. Miscellaneous poems. Venus and Adonis—a poem of youth filled with poetic passion.
 - II. Sonnets, 154 in number. Memorize, "To His Love;" "Memory;" "The Life Without Passion."
 - III. Drama—his crowning work. Define drama. Three divisions
 - (1) Comedy—(define); (2) Tragedy—(define); (3) Historic plays—(define).
- b.—Five periods of drama:
- a. Dramatic apprenticeship, 1588-1594. Comedy—Love's Labor Lost, Comedy of Errors, Two Gentlemen of Verona, A Midsummer Night's Dream; Tragedy—Romeo and Juliet; Historical—Henry VI., Richard II. and III.
 - b. Great comedies, 1595-1600; contains no tragedies. Merchant of Venice, Taming of the Shrew, Merry Wives of Windsor, Much Ado About Nothing; Historical—King John, Henry IV. and V.
 - c. Hamlet period, 1601-1604. Comedy—As You Like It, Twelfth Night, All's Well That Ends Well, Measure for Measure; Tragedy—Julius Caesar, Hamlet and Othello.
 - d. Lear period, 1605-1608. Coriolanus Lear, Macbeth, Antony and Cleopatra, Troilus and Cressida, and Timon of Athens.
 - e. Period of romances, 1608-1613. Cymbeline, Winter's Tale, Tempest, Henry VIII.
5. Contemporaries of Shakespeare. Ben Johnson, Beaumont, Fletcher and Francis Bacon.
6. Died 1616, 52 years old.

All this work down to the study proper of Julius Caesar, I would give to the class myself.

III. — JULIUS CAESAR PROPER.

- A. Introductory study.
1. How classified with his other plays?
 2. Historical source of Julius Caesar.
 - I. Where did Shakespeare obtain the material for this tragedy?
 - II. Where and when did Julius Caesar live?
 - III. Tell something of his life.
 - IV. By whom was he offered the crown?

V. Over how long a period do the events of this drama extend?

B. Study proper.

ACT I.— (Here I would explain acts and scenes.)

Scene I.—

1. What is the value of this scene?
2. How many times is Caesar's name mentioned?
3. Does this scene given an idea of the kind of play Julius Caesar is going to be?
4. Explain reference to "triumph over Pompey's blood."
5. Explain reference to "Disrobe . . . with ceremony."

Scene II.—

1. Tell what takes place in this scene.
2. What, then, is its purpose?
3. What new characters are introduced?
4. In what way does the soothsayer add to this scene? What connection has he with the plot?
5. What is the value of the conversation between Brutus and Caesar?
6. What is the attitude of Cassius toward Caesar?
7. What kind of a temperament has Cassius?
8. What kind of a temperament has Caesar?
9. Why does Caesar speak the way he does in lines 7 and following on page 55?
10. Why does Shakespeare mention Caesar's swoon?
11. What is the value of the last speech of Cassius'?
12. Why does not Cassius carry out the plot, instead of leading Brutus to do it?

Scene III.—

1. What is the purpose of having a storm in this scene?
2. Does the scene further the plot or the setting or both?
3. How much time do these three scenes cover?
4. How does Cassius describe Caesar?
5. Into what argument do Caesar and Cassius enter?
6. What new character is introduced in this scene?
7. After Cinna enters what does the conversation show?

ACT II.

Scene I.—

1. What new character is introduced?
2. What has Brutus in mind when he says: "It must be by his death."?
3. Memorize: "But did ascend."
4. Is there any clue as to who wrote the note to Brutus?
5. In what way does this letter assist in the plot?
6. What promise does Brutus make?

7. Is this a surprise or has Shakespeare prepared us for the actions of Brutus?
8. Commit: "A conspiracy from prevention."
9. In the speech, "What watchful cares do interpose themselves,"—do you think Brutus is innocent of their purpose, or is he so anxious that he takes this measure, drawing them out more readily?
10. Notice the description of dawn in this scene?
11. What resolutions does Cassius refer to?
12. Why did not Brutus favor killing Antony also?
13. What sort of man is Decius?
14. What does Portia disclose in her speech?

Scene II.—

1. Memorize: "Cowards die when it will come."
2. Was Decius as sincere with Caesar as Caesar was with him?
3. What relation has this scene to the play?

Scene III.—

1. What takes place in this scene?

Scene IV.—

1. Does this scene add to the plot or the setting?
2. Memorize: "O, constancy keep council."
3. Is it possible that Portia knows what is going to take place?

ACT III.

Scene I.—

1. What is the significance of Caesar's first speech?
2. Do the words of the soothsayer add to the plot?
3. What does Caesar lose by the heedlessness of Artemidorus' suit?
4. What plot have the conspirators made by means of which to trap Caesar? Who prefers the suit?
5. Who stabs Caesar first?
6. Find the climax of the tragedy.
7. Teach here the logical division of the action.
8. Pick out the turning point of the plot.
9. What does Antony show in his speech beginning with, "My credit," and finishing the speech?
10. What requests are made by Antony?
11. Are they granted him?
12. Does Brutus make a mistake when he allows Antony to speak at Caesar's funeral?
13. What promise does Brutus require of Antony?
14. Commit: "O, pardon me groaning for burial."
15. What does this speech of Antony's illustrate?

Scene II.—

1. Memorize: "Romans need my death."
2. Classify this speech according to rhetoric.
3. In this speech find the keynote of action of Brutus.
4. Should Brutus have stayed after he finished his speech?
5. Did he have any influence with the mob?
6. Why does he not stay to hear Antony?
7. Memorize: "Friends, Romans to rise and mutiny."
8. In the first of Antony's speech, he says he came to bury Caesar, not to praise him. How do you reconcile this with the rest of his speech?
9. Does Antony have as strong an influence over the mob as Brutus?
10. What effect has the speech, "O, masters unto their issue," upon the mob?
11. When does Antony realize that he has the mob completely under his control?
12. Does Antony keep the promise made to Brutus?
13. What effect has the speech, "But were I Brutus to rise and mutiny," upon the people?
14. What had Caesar done for the people?
15. Did Brutus know about this will?

Scene III.—

1. What is the purpose of this scene?

ACT IV.

Scene I.—

1. What new characters are introduced?
2. Have we had any preparation for this coming?
3. What is the value of Antony's speech, which begins: "So is my horse," etc.?
4. What is the purpose of this scene?

Scene II.—

1. Where is this scene laid?
2. Why is it cut so short?
3. Have we been prepared for this scene?
4. Does it add to the plot?

Scene III.—

1. What are Brutus and Cassius quarreling over?
2. Who begins the quarrel?
3. Memorize: "That thou have wronged and leave you so."
4. Is Cassius brave or only a braggart?
5. Select the lines in which Brutus becomes angry.

6. Of what value to the story is the scene between Brutus, Lucius, Varro, Claudius, and the ghost?
7. What does the ghost prepare us for?

ACT V.

Scene I.—

1. Opening of scene brings both forces together in the light of the preparation seen in the preceding act.
2. Explain, "When you have stomachs."
3. In the last of this scene, do you think Brutus and Cassius are sorry for the work begun on the Ides of March?

Scene II.—

1. What does this scene do for the next two scenes?

Scene III.—

1. Judging from the speech of Litinius, is Brutus a good general?
2. Is there any difference in the action of the play?
3. What happens to Cassius?
4. Memorize: "O, setting sun done this deed."
5. What business of Litinius?
6. Find the keynote of the play in this scene.

Scene IV.—

1. What happens to Cato?

Scene V.—

1. Why this stopping to rest at a crucial moment?
2. What does Brutus want his follower to do?
3. Does he have trouble in getting someone to agree to his suit?
4. Who finally consents to kill Brutus?
5. Who gave the final tribute to Brutus. What was it?

The play is not to extol anyone, but to bring retribution to Caesar's murder and victory to his avengers.

CONCLUSION.

- I. Write a brief summary of the plot.
- II. Write a description of Portia.
- III. Characterize Brutus and Cassius.
- IV. Through what medium do we learn what kind of man is Caesar?

A TALE OF TWO CITIES.

(By Charles Dickens.)

CHAPTER I.

1. What date is referred to in Chapter I?
2. What two countries are mentioned?

3. Who were the rulers of these two countries at the time mentioned?
4. Describe the condition of France and England as told by the author.
5. What figure of speech is used in describing Fate and Death?

CHAPTER II.

1. What is meant by the Dover mail?
2. How many passengers were there?
3. Why did the guard have so many firearms?
4. Who is Mr. Jarvis Lorry, and who Jerry?
5. What was the message and what the answer?
6. What purpose does the conversation between the guard and the messenger serve?

CHAPTER III.

1. Give a word picture of Jerry?
2. What in and about the coach reminded the passenger of the Bank of Telson?
3. What does the soliloquy of the passenger prepare us for?

CHAPTER IV.

1. Select the unusual words in Chapter IV.
2. How did the author introduce this character, the young lady, before?
3. Describe Dover?
4. Tell the main part of the story from Chapter I to Chapter V.
5. Mention two or three lines which lead us to believe that Mr. Lorry knew Miss Manette well.

CHAPTERS V AND VI.

1. Read the lines that denote a future evil.
2. Summarize the important events in Chapter V.
3. Mention the principal character in Chapter I to Chapter VI.
4. Who was the shoemaker? Write a sketch of him.
5. Tell the story contained in Chapter I to Chapter VI.
6. What figures of speech predominate in Book I?
7. Do short or long sentences predominate in Book I?
8. When did the events related take place?
9. About how long did it take for these events to occur?
10. Locate the different places mentioned in the story.

BOOK THE SECOND — CHAPTERS I. AND II.

1. What purpose does the fourth paragraph serve?
2. Where do the events related in these chapters take place?
3. What purpose does the conversation at beginning of Chapter II. serve?

4. What is the purpose of paragraph 2?
5. Select a rhetorical paragraph in Chapter II.

CHAPTERS III., IV. AND V.

1. What does Mr. Carton's resemblance to the prisoner and his kindness toward him portend?
2. How does the author present the court scene to us? What purpose does it serve?
3. What purpose do Chapters III. and IV serve?

CHAPTER VI.

1. Describe the home life of Lucie.
2. What lines in the chapter indicate future action?
3. Give short account of Dickens' life.
4. Mention some of his works.

CHAPTERS VII. AND VIII.

1. Trace through Chapters VII., VIII. and IX. the indications of a revolt of the poorer classes.
2. What is foreshadowed by the reference, which the marquis makes concerning the doctor, Manette and his daughter?
3. Give the outlines of the story as far as Chapter X.

CHAPTERS X. AND XI.

How does Mr. Itryver compare with Mr. Charles Darnay in regard to character?

CHAPTERS XII. AND XIII.

Why was the character of Sydney Carton introduced, and how does he compare with Mr. Stryver as to character?

CHAPTERS XIV., XV. AND XVI.

Why were the characters John Barsad and Roger Cly introduced? What have they to do with the plot of the story?
Show how this Chapter XV. is connected with the Chapter VIII.
How are the characters of Darnay and Lucie introduced here?

CHAPTERS XVII., XVIII. AND XIX.

Does this chapter throw light on Lucie's character?
What caused the relapse of the doctor?
Did the doctor suspect that he was the patient spoken of by Mr. Lorry?

CHAPTER XX.

Does this conversation seem out of place?
How was this profession of friendship brought about?

CHAPTERS XXI., XXII., XXIII. AND XXIV.

Enumerate the events that have prepared us for this attack in the Bastille, and in the chateau.

CHAPTER XXIV.

How long did the revolution last?

BOOK THE THIRD. — CHAPTER I.

Why did Darnay go to France?

Trace the incidents that led to his imprisonment?

CHAPTER II.

Of what use is this chapter to the plot of the story?

CHAPTERS III. AND IV.

Why are they so merciless toward Lucie?

What has the guillotine and horrors described to do with the plot?

CHAPTERS V. AND VI.

Does the introduction of the characters of Madame Defarge, and the wood-sawyer seem to be of significance?

Give the reasons for Darnay's release.

CHAPTERS VII. AND VIII.

Why is Darnay re-arrested?

How were Barsad and Cly connected formerly with the city?

CHAPTER IX.

Do Mr. Carton's efforts on behalf of Darnay recall to your mind any conversation with Darnay? If so, give the gist of the conversation with Darnay.

CHAPTER X.

Enumerate the events that led up to the imprisonment of Dr. Manette.

At what part of the story does the plot begin to be unravelled?

Mention three or four sub-plots.

CHAPTERS XII. AND XIII.

In the lights of this chapter, is Madame Defarge's revenge to be wondered at?

Tell how Carton hoped to save the life of Darnay.

CHAPTER XV.

How does the author foretell the room of the new oppressors? Who is the woman mentioned?

CRANFORD.

I.

What general impression does "Cranford" leave in your mind? Is it tense, excited, unsettled, unpleasant, sad, quiet, restful, happy or peaceful?

II.

Outline the plan of the story.

III.

Which chapter did you enjoy most? Why?

IV.

Write a sketch on Cranford society.

V.

Is there a plot to Cranford?

VI.

Make a list with definitions of all new words.

VII.

As you read, clear up all the allusions.

VIII.

Where is the story located? What is the time of it?

IX.

Pick out the principal characters and write a short sketch on one.

X.

Tell how the picture of each is brought before you, whether through the person's conversation, dress or by the author's description.

XI.

Pick out the minor characters and show their connection with the others.

XII.

Which character was most pleasing to you? Why?

XIII.

What is the background employed in the stories?

XIV.

What style of sentences does the author use; long, short, simple, complex, compound?

XV.

Pick out all figures of speech as you meet them.

XVI.

Give a brief outline of the author's life.

QUESTIONS ON SIR ROGER DE COVERLEY PAPERS.

A. — LIFE OF ADDISON.

1. During whose reign was Addison born?

2. Tell something of his early life and education.
3. What was his attitude toward politics?
4. Tell something about the Whigs and Tories.
5. What official position did Addison hold?
6. When did he begin to write and what was his first success in this work?
7. What different kinds of literary work did he produce?
8. Mention an example of each kind.
9. In which of these works is Addison seen at his best?

B. — LIFE OF STEELE.

1. Mention the most interesting facts concerning Steele's early life.
2. Where did Steele and Addison first become acquainted?
3. Did Steele take an active interest in national affairs?
4. Tell something about Steele as a writer. Mention some of his publications.
5. Why was the Tatler dispensed with, and the Spectator published in its place?

C. — THE SPECTATOR.

1. What kind of publication was the Spectator?
2. Were there as many publications then as there are now? How do they compare?
3. What was the purpose of the Spectator.
4. Who were the fashionable men and women of London at that time?
5. Tell something of their amusements.
6. How do their gardens and theatres differ from modern ones?
7. What were the coffee-houses?
8. Were there very many in London then?
9. Who were the country people, and from what source did they obtain their wealth?
10. Tell how they traveled about.
11. Tell something of their religious and political organizations.

TENNYSON'S IDYLS.

GENERAL.

1. What have you learned from these three Idyls about Lot and Bellicent?
 2. Does Gareth seem the same in each Idyl? Does Gawain?
 3. What thread binds the stories together?
 4. What virtues did Arthur demand of his knights?
 5. What special virtue is required in each Idyl?
 6. What is the outline of Arthur's story?
- Make a list of twenty-five pictures that please you most.

GARETH AND LYNETTE.

1. What do you think of Lynette?
2. What do you think of Gareth? Note passages that give impressions.
3. How does the character of Arthur appear as people appeal to him?
4. What is Sir Kay's attitude toward Gareth?
5. Why does the baron whom Gareth rescued sit by him instead of near Lynette?
6. Where does the change in Lynette's attitude toward Gareth first begin to appear?
7. How are different knights whom Gareth meets caparisoned?
8. Does "Death's" array frighten Gareth?

LANCELOT AND ELAINE.

1. Where did Arthur find the diamonds?
2. Who suggested the thought of disguise to Lancelot?
3. Note the difference between Gawain in this and preceding ldy.
4. What more do you hear of Gareth?
5. What do you think of the character of Elaine? (Note passages.)
6. Note the passages that contrast Elaine and Guinevere.
7. Was Lancelot right in saying he defeated men because they feared him?
8. What do you remember of the tournament?
9. What is Gawain's position among the knights?
10. What is the difference between Elaine's brothers?
11. Does Lavaine grow?
12. Was there a reason for Torre's ill humor?

THE PASSING OF ARTHUR.

1. Is Arthur weary of the battle of life?
2. Why is Gawain borne upon the wind?
3. Why does Modred fight the king?
4. Does the battle seem real?
5. Is it the beauty or fame of the sword that attracts Sir Bedivere?
6. Why could he not deceive Arthur?
7. Who are the queens?
8. How do you like the close?

THE COMING OF ARTHUR.

SOURCE OF THE PLOT.

Where did Tennyson get the story of King Arthur?

Give briefly a picture of King Arthur and his court, as given in Mallory.

How ancient and widespread was his renown?

What sort of knights composed his Table Round, and what were their various ambitions?

QUESTIONS ON INCIDENTS.

Give a brief sketch of the story.

Tell how Arthur first chanced to see Guinevere.

Why did he not attract her attention as she did his?

What was his hope in marrying her (line 90)?

Describe the battle.

Why did Lancelot believe him king (line 127), and how did he express his trust?

Why did Leodogran hesitate to give Arthur his daughter?

What were the different stories as to Arthur's birth?

Give the story of Excalibur.

What finally decided Leodogran?

How did Guinevere come to Arthur?

Describe the wedding.

In the song that follows, what verse best expresses the spirit of Arthur's court?

SETTING.

Where was "this isle" (line 6)?

What condition was it in before Arthur came?

Why did Leodogran need Arthur's help?

At what time approximately, did this take place?

GENERAL QUESTIONS.

Characterize Arthur.

What do you think of Leodogran?

Who is Merlin?

Is there any justification for the knights who fought against Arthur?

What do you think of them in comparison with Bedivere and those who upheld him?

What kind of poem is this?

Mark any two lines to show the meter.

Is the rhythm strongly marked?

Pick out some figures of speech.

What kind of figure is most used?

THE PASSING OF ARTHUR.

1. Does Arthur show that he is weary of life?
2. Why is Sir Gawain borne upon the wind?
3. Have you read of the appearance of a ghost, just before the battle, in any other book?
4. Why does Modred fight the king?
5. Compare the battle of this Idyl with Lancelot's description of Arthur's wars in "Lancelot and Elaine."

6. Does the battle seem real?
7. What is the meaning of the mist about the battlefield?
8. Is there any indication as to the time that the battle took place?
9. How did Arthur receive his sword?
10. Why is it to be given back to the water?
11. The first time that Sir Bedivere kept the sword did he want it because of its beauty or of its power?
12. What attracted him the second time?
13. Why could he not deceive Arthur?
14. Does Tennyson try to teach a lesson through Sir Bedivere's conduct when he finally casts away the sword?
15. Has the description of the place through which Bedivere bore Arthur to the sea any special force?
16. Of what does the funeral barge remind you?
17. Who are the queens?
18. What is Arthur's destination?
19. How do you like the close?
20. Select any striking figures and give your reasons for your choice.
21. Choose words that are onomatopoetic.
22. Do these words add to the beauty or power of the poem?
23. Is alliteration noticeable in this Idyl? Give examples.
24. Select unusual and beautiful epithets.
25. Is there any description in this Idyl that particularly impresses you?
26. Does this Idyl teach any lesson, or does it merely complete the series?

ARTHURIAN LEGEND.

1. What is the story of the Round Table?
2. Is the story really true?
3. From what source did Tennyson gain his story?
4. Was Arthur a real or a mythical king?
5. Whom do you consider the most important knight in the Idyls?
6. For what do you remember each?
7. What virtues were enjoined upon the members of the Round Table?
8. What virtues were portrayed in the Idyls read in class?
9. Did Tennyson intend a general lesson to be drawn from all the Idyls?
10. Does allegory play an important part?
11. Are there places that lose the allegory in the story?
12. Where is Avilon?
13. What is the story of the Holy Grail?
14. Is it an important part of the Arthurian legend?

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in the United States.

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DEPARTMENT OF EDUCATION

HENRY B. DEWEY,
Superintendent of Public Instruction.

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THE
HIGH SCHOOL CURRICULA

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UNITED STATES

A COMPARATIVE STUDY

Thesis for the Degree of Bachelor of
Arts in Education

BY
VIRGIL EVERETT DICKSON

WASHINGTON STATE COLLEGE
Class of 1908

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GROWTH AND DEVELOPMENT OF THE AMERICAN HIGH SCHOOL.

After studying the curricula of the high schools in various parts of the United States one finds himself in confusion at first as to what is our high school system, and he begins to wonder if we really have any system at all. Yet, a closer investigation shows a great similarity in almost all high schools and a growing tendency to become more similar.

In this work it is my purpose to give, as clearly as possible, what constitutes the present high school course of study; to point out the characteristics of some courses that are considered good, and to give the opinions of the best authorities I can find used in supporting such courses, together with comments upon some tendencies of the present high school. It is not my purpose to establish the truth of any preconceived notion of my own, but I shall attempt to show, as nearly as I can, what are the present conditions. I shall give the authority for opinions that are not my own and the reader can accept them for what they are worth.

First, let us make a rather careful and lengthy study of the growth and development of the American high school, which study is absolutely essential to a proper understanding of its present mission in the educational field.

The American high school or secondary school (in this paper the terms high school, secondary school, and secondary education will be used as synonyms) is unique from the fact that there is no other school system in the world that is like it. Beginning at the period of American settlement, Prof. E. E. Brown has indicated that there have been three rather distinct stages of development of American secondary education, culminating in the present high school. First comes the colonial or Latin grammar—school period; second, the academy period, extending from the Revolutionary war to the middle of the nineteenth century; third, the succeeding period up to the present time, characterized by the growth of the public high school. I might ask: Have we now a new agricultural or industrial period?

The first American school seems to have been established by the citizens of Boston in 1635. In 1647 the colonial legislature of Massachusetts decreed that in every town of a hundred families or more there should be a grammar school "to fit students for the university." This example was followed by the other colonies. These colonial schools were primarily fitting schools for the college or university. Their courses of study were determined by the college entrance require-

ments. It is interesting to notice the Harvard requirements in the middle of the 17th century: "When scholars had so far profited at the grammar school that they could read any classical author into English, and readily make and speak true Latin, and write it in verse as well as prose; and perfectly decline the paradigms of nouns and verbs in the Greek tongue, they were judged capable of admission into Harvard college." One hundred years later we have the following from Princeton college: "Candidates for admission into the lowest or Freshman class must be capable of composing grammatical Latin, translating Virgil, Cicero's Orations and the four Evangelists in Greek; and by a late order, must understand the principal rules of vulgar arithmetic."

Thus we see that the first secondary schools of America were devoted almost entirely to the teaching of Latin and Greek, with some religious training. They fitted for college and were utilized by those students, in the main, who were fitting for clerical or ministerial professions. Hence they might almost be termed schools for the upper classes.

About the Revolutionary War period the state and church were growing apart and the colonial secondary educational system gave way to what is known as the academy. The early purpose of the academies, however, was not that of preparatory schools. They were for the middle classes and supplied a demand for general efficiency in education without any particular reference to college preparation, and were regarded as more practical than the college. More attention was given to the English language, grammar, rhetoric, the art of public speaking, mathematics, surveying and navigation, natural philosophy (physics), astronomy, geography, history and sometimes French and German besides the Latin and Greek. Often parallel courses were offered; e. g., classical, English, and scientific.

The first state system of education was established in the University of the state of New York in 1784, which was to include both secondary and higher education. This was followed by Michigan, Tennessee, Indiana and others, and from the writings of these times we find such phrases as "complete educational system," "regular gradation from township school to university," "free, open to all." Here we see emphasized the free nature of the high school and its position as connecting link between elementary and higher education.

In 1821 Boston established the "English High School" as a secondary school to take the place of the academy. The name was taken possibly from the Edinburg high school. This school was supported and managed by the community, and its curriculum did not include the ancient language. It was to meet the needs of the middle and commercial classes especially, and furnished courses in English language and literature, mathematics, navigation and surveying, geography, natural philosophy, astronomy, history, logic and moral and political philosophy. It received students from the elementary schools but did not fit students for entrance to college until later, when

foreign languages were added to the curriculum. This was the first real public high school in the modern sense of that term.

Objections have come up at various times, the chief of which seems to be the constitutional right of the state to maintain and manage educational affairs. This question was met by the decision of the supreme court of Michigan in the famous "Kalamazoo case" in the following words:

"Neither in our state policy, in our constitution, nor in our laws do we find the primary school districts restricted in the branches of knowledge which their officers may cause to be taught or the grade of instruction that may be given, if their voters consent, in regular form, to bear the expense and raise the taxes for the purpose." We do not now hear so much objection to the support of secondary education from public funds.

THE COURSE OF STUDY.

I have given a rather long history of the high school movement in order that we may understand what are the problems before us when we begin to determine what shall be the curriculum of this school, supported by the money of the public, and inviting all the youth to its doors.

The questions naturally arise, What does our high school teach? Whom does it teach? How does it teach? What is, and what should be its relation to the elementary school, to higher education, and to those who finish their education in the high school? Does it justify, to the highest extent, its support from the public by its returns to the public? These are the questions upon which there is much difference of opinion, but out of which there seems to be growing more harmony and unity.

Let us consider first what our high schools are teaching. For this work I have tabulated certain facts from 59 courses of study and have noted the comments upon them. They represent cities in the United States—north, south, east, west, and middle—from the largest city to that of 10,000 inhabitants. The following table will be of little value to the reader, but may help him to understand better the explanation that follows.

CITIES.	Number of Different Courses Offered in Each School.										
	2	4	Gen. 5	3	6	Gen. 8	Gen. 4	3	3	Gen. 5	4
Ashville, N. C.	X	X									
Atlanta, Ga.											
Baltimore, Md.											
Berkeley, Cal.											
Beverly, Mass.											
Birmingham, Ala.											
Boston, Mass.											
Braddeek, Pa.											
Burlington, Vt.											
Cairo, Ill.											
Cambridge, Mass.											
Canton, Ohio.											
Cedar Rapids, Ia.											
Chicago, Ill.											
Cleveland, Ohio.											
Cincinnati, Ohio.											
Council Bluffs, Ia.											
Covington, Ky.											
Dallas, Tex.											
Davenport, Ia.											
Denver, Colo.											
Detroit, Mich.											
Duluth, Minn.											
Fall River, Mass.											
Fresno, Cal.											
Grand Rapids, Mich.											
Houston, Tex.											
Indianapolis, Ind.											
Jersey City, N. J.											
Kansas City, Mo.											
Kirksville, Mo.											
Astronomy											
Gymnasium or Physical Culture....											
Drawing or Painting.											
Music											
Domestic Science....											
In which M. Tr. is Taught or Offered..											
Architecture.....											
Academic.											
Kindergarten											
Mathematics											
Engineering.....											
Elective Course.....											
German Course.....											
Domestic Science....											
Normal											
General Course											
Pre-Medical											
Law Preparatory											
Agriculture.....											
College Preparatory.											
Music											
Technical.....											
Art Course											
Mod. Language.											
History											
Manual Training											
Commercial											
Science											
Latin											
English											
Classical Course											

* For girls only. + General † Required. ‡ Spanish.

In the preceding table I have considered 59 of our representative high schools, and base my information upon their catalogs for 1906-7. The names at the top of the page designate the courses that are offered—not the subjects. It will be noticed that in all the schools investigated I have found courses classified under 26 different headings; i. e., a student might graduate with a diploma from the Latin course, English course, or agricultural course, etc. Notice in the column headed "No. of courses offered in each school" that the number ranges from 1 to 11, Houston, Tex., having the greatest number offered in any one school. The average number of courses for each school would be 5. In the number of courses, schools seem to be undergoing a great change, with a tendency to have fewer definite courses mapped out and a liberal choice of elective subjects after certain general requirements are met. Thus it will be noticed that a number of the best schools have marked after them "general course with numerous electives." These schools usually have printed "suggestive courses." The idea is for the student's program to be arranged by what he is fitting himself for, the subjects to be determined by conference of the pupil, parent, and principal of school whenever this is possible. Some cities offering such a curriculum are: Baltimore, Boston, Burlington, Vt.; Chicago; Dallas, Tex.; Indianapolis; North Yakima, Wn.; Oakland, Cal.; Portland, Me., and Trenton, N. J.

These schools vary somewhat, but the standard seems to be to have from 7 to 9 units of work listed as "required subjects" for all. Some schools have the rest of the units elective by subject, but the majority have four or five units (above the required) elective by groups; e. g., science group, history group, etc., and the rest of the units elective by subject. The standard number of units for graduation is from 14 to 16—a unit representing one year's work, five days per week with periods of not less than forty minutes for recitation subjects, or eighty minutes for laboratory work.

One rather surprising fact is that the commercial course is named in a larger number of schools than any other single course. Out of the 59 schools the commercial course is represented in 40, the science in 27, the general in 27, the classical in 23, the English in 19, the manual training in 16, the college preparatory in 14, the Latin in 13, the normal in 12, the modern language in 10, the technical in 8, the German in 7, the art in 5, the domestic science in 5, the elective in 3, the academic in 3, the law preparatory in 2, pre-medical in 2, the music in 1, the agriculture in 1, the kindergarten in 1, the architecture in 1, and the Spanish in 1.

Let the reader keep in mind that no definite conclusion can be reached from such a table as is given above. My study has not been thorough enough to insure that the table is even carefully accurate. My only purpose in presenting it in this study is that the reader may gain a tentative idea of the condition of the school curriculum as I have studied it and that he may see upon what sort of study and information I base whatever statements I give. Let us take, for ex-

ample, the 19 schools that offer the English course. We know that possibly all, or nearly all, of the 59 schools offer enough English for what might be termed an English course. But the information that I have given in the table is taken only from the statement of the school catalog of the "courses offered." The fact, however, that the commercial, classical and scientific courses are mentioned in the leading rank; that the manual-training course is mentioned only slightly less than the English and more than the Latin should bear some weight in indicating the trend of the present curriculum. It is also worthy of notice that more than 20 per cent. of the schools examined offer a normal course for the training of teachers.

For the sake of investigation along the newer lines of study we also have tabulated, from the same schools, some of those subjects whose place in the curriculum are being so much discussed. Drawing, painting or art is taught or offered in 41 schools out of the 59, or about 67 per cent. of the schools; manual training in 34, or 50 per cent.; domestic science in 19, or 49 per cent.; physical culture in 18, or 31 per cent.; astronomy in 13, or 22 per cent. This, I think, can be taken as a fair basis of representation for these subjects in high schools of towns with 15,000 or more population. As we get down into the smaller towns where the high schools have from 1 to 5 teachers, much of the work is necessarily left out because the teaching force is inadequate for handling the extended curriculum. But in a surprising way, some of these subjects are making for themselves a place in high schools where there are but three or four teachers.

A STUDY OF CERTAIN HIGH SCHOOL COURSES.

CURRICULUM OF THE HORACE MANN HIGH SCHOOL.

FIRST YEAR.

<i>Required.</i>		<i>Electives.</i>	
English	5 †	Latin	5
Physiology	3	French	3 ‡
Mathematics	3	Manual Training or Art.....	1(2)*
Music	1		
Physical Training.....	1(4)*		
	<hr/> 13		

SECOND YEAR.

<i>Required.</i>		<i>Electives.</i>	
English	3	Latin	5
History	3	Beginning or Advanced French...	5 or 3
Physical Training	1	Mathematics	5
Music	1(4)*	Manual Training or Art.....	1(4)*
	<hr/> 8		

THIRD YEAR.

<i>Required.</i>		<i>Electives.</i>	
English	3	Latin	5
Physical Training	1(4)*	Beginning French or Greek....	5
	<hr/> 4	Advanced French	3
		Mathematics	5
		History	3
		Physics	4(6)*
		Manual Training or Art. 2(6) or 1(4)*	

FOURTH YEAR.

<i>Required.</i>		<i>Electives.</i>	
English	3	Latin	5
Physical Training	1(4)*	French or Greek.....	4
	<hr/> 4	Advanced French	3
		Mathematics	4
		History	3
		Chemistry	3(4)*
		German	4
		Music	1
		Manual Training or Art. 2(6) or 1(4)*	

FIFTH YEAR.

<i>Required.</i>		<i>Electives.</i>	
English	3	Latin	5
Physical Training	1(4)*	French or Greek.....	4
	<hr/> 4	Advanced French	3
		Mathematics	3
		History	3
		Physiography	3(4)*
		Music	1
		German	4
		Manual Training or Art. 2(6) or 1(4)*	

* Numbers in parenthesis indicate the number of recitation periods per week.

† Indicates the number of credits assigned to the subject.

‡ Open only to those who have studied French in the elementary school.

The Horace Mann high school, mentioned above, is the training school under the supervision of the Teachers' College of Columbia University, New York. Its curriculum should be typical of the most modern movements in the high school, and especially of the eastern high school. Virgil Prettyman, in commenting upon the course (Teacher's College Record, March 1906) brings out that the conditions of the community determine largely the grouping of studies. The high school must bear a practical relation to the future life of the pupils and meet the demands of the homes, in part at least, or the patrons will refuse to give it their confidence and support. The student who plans to enter commercial life, or the one who wishes to enter college has a right to expect of the high school such education as will fit him, in large measure at least, for his chosen course.

At first the Horace Mann high school offered no foreign languages and only a limited amount of history and English, but all these were added upon the demand of numbers of students who wished to prepare for college. Ninety per cent. of the students entering express a desire to fit for college, and 80 per cent. of the graduating classes now enter college. Those preparing for college can not be separated from those who are not. A broad elective system, with a few required studies, is the only practicable scheme of administration.

Let the reader keep in mind that this course of study is for a high school in the east where the environment is such that a larger percentage of high school students go to college than go from the middle or western schools. At least one foreign language must be studied by each pupil for two years. Each pupil must have credits for fifteen hours of work per week. It will be noticed that the first year has the most required work—thirteen credits—giving room for two elective credits; the second year leaves room for seven, and the others for eleven each. This shows the tendency, which is general, to defer the electives to the later years of the high school courses. English required through the entire course is common, but not so with music, which is here required for two years. The most noteworthy feature about the program is the requirement of physical training throughout the entire course. This subject, next to industrial education is being agitated at present, possibly as much as any other phase of the high school curriculum.

Now let us turn to the middle states. I find that there is very definite and uniform instruction in the high schools of the state of Indiana. I take its course as the representative of a rigid high school curriculum of the middle states. The law provides that the following studies "shall be taught in all commissioned high schools throughout the state, together with such studies as the local board may elect, subject to revision by the state board of education:"

Mathematics—Commercial arithmetic, algebra, geometry.

History—United States, ancient, mediæval or modern.

Geography—Commercial or physical.

English—Composition, rhetoric.

Literature—English, American.

Language—Latin or German.

Science—Biology, physics or chemistry.

Civil Government—General, or state.

Drawing.

Music.

The following course of study is arranged according to the law of Indiana and is uniform throughout the state (Indiana State Manual 1907-08) for all commissioned high schools:

FIRST YEAR.

Algebra	1 yr.
Botany or Zoology	1 yr.
English	1 yr.
Latin or German	1 yr.

THIRD YEAR.

Plane and Solid Geometry	1 yr.
English	1 yr.
Mediaeval and Modern History ..	1 yr.
Latin or German	1 yr.

SECOND YEAR.

Algebra and Plane Geometry	1 yr.
English	1 yr.
History of Greece and Rome	1 yr.
Latin or German	1 yr.

FOURTH YEAR.

American History and Civil Government	1 yr.
Physics or Chemistry	1 yr.
Physical or Com'l Geography	$\frac{1}{2}$ yr.
Commercial Arithmetic	$\frac{1}{2}$ yr.
Elective	1 yr.
Music (1 period per week)	1 yr.
Drawing (1 period per week)	1 yr.

A course proposed by a committee of the county superintendents' section of the State Teacher's Association of Illinois and adopted by Illinois, Kansas, Wyoming, Oklahoma and numerous counties of other states follows:

(Course of study for the common schools of Illinois, 1907, page 260.)

SCHOOLS HAVING THREE HIGH SCHOOL TEACHERS.

FIRST YEAR.

<i>Required.</i>	<i>Elective (choose two).</i>
English.	Latin.
Algebra.	Physiography. $\frac{1}{2}$; Physiology, $\frac{1}{2}$.
	Bookkeeping and Arithmetic.

SECOND YEAR.

<i>Required.</i>	<i>Elective (choose two).</i>
English.	Latin.
Plane Geometry.	Zoology. $\frac{1}{2}$; Botany, $\frac{1}{2}$.
	Greek and Roman History.

THIRD YEAR.

<i>Required.</i>	<i>Elective (choose two).</i>
English.	Latin.
Physics.	Mediaeval and Modern History.
	German.
	Solid Geometry and Algebra.

FOURTH YEAR.

<i>Required.</i>	<i>Elective (choose two).</i>
English.	Latin.
English History, $\frac{1}{2}$.	Political Economy and Civics.
United States, $\frac{1}{2}$.	Chemistry.
	German.

The course is plain and needs no further comment.

Space will not permit me to give further what I have found in regard to courses of study for one, two or three year high schools. I would refer the reader, desirous of such information, to an excellent document entitled "Course of Study for the Common Schools"—1907, published by Hammond and Stephens Co., Fremont, Nebraska—price 30 cents; also to the Iowa Biennial Report 1905—page 163.

Let us take one other illustration from a middle-northern state. In the state of Wisconsin every four-year high school course must contain at least fourteen year units of work, among which the following are required:

Mathematics two units, English two units, science two units, and history two units. Theory and art of teaching is required by law to be offered twelve weeks each year.

Schools having more than one course are required to adopt and offer an English course which shall contain no foreign language. Schools offering only one course are permitted to offer not more than two years of foreign language, and that after it has been shown, by a resolution passed at an annual meeting, that the people of the community desire it. This attitude toward foreign language is worthy of special notice, coming as it does from an entire state system—a state fairly strong in educational affairs.

In the west the outline course of study for high schools of the state of Washington (Biennial Report 1906—page 110) requires of all students:

First year—English, algebra. Second year—Plane geometry, rhetoric and English classics. Third year—English, physics. Fourth year—U. S. history and civics—making 7 year—units required. In addition to these requirements an election is offered in groups of scientific, classical, English and commercial courses for 4 or 5 year units; then 4 or 5 more units are to be elected by subject, with liberal opportunity to choose in history, mathematics, drawing, manual training and household arts. Any school, with competent teachers, following this course will have no trouble in getting on the state list of approved high schools.

The reader may wonder why I have given more discussion of courses from the middle states than from any other section of the country, and why I have omitted discussion from the southern states. My reason for doing so is that in the middle states I have found more agitation, more discussion and more definite action in regard to the high school course. They seem to constitute the vanguard in the present revolution of the curriculum. It might be interesting to notice that there are more than $2\frac{1}{2}$ times as many high schools in the north central states as in all the rest of the United States; more than 2 times as many as in the north Atlantic states; 5 times as many as in the south central states, and nearly eight times as many as in the south Atlantic states, and 9 times as many as in all the western states. (Educational Review, March, 1907—page 248.) Therefore do

I give more space to the discussion of high schools of the middle section.

THE TREND TOWARD UNIFORMITY.

In this study I have examined the state superintendents' reports from nearly all the states of the union, and the cry heralded from almost every section is for more uniformity in our secondary education. Of course an absolute uniformity could not be and is not desired. Local environment and community interest are always to be considered in education. But our land is broad, communication and travel from one part of the country to another is rapid and easy, the social unrest is such that annually hundreds of students move from one locality to another. Many times such a student finds that the work done in his old home high school does not fit into the curriculum, and will not be accepted by the high school in the community where he has taken up his new home. This causes dissatisfaction and oftentimes discouragement. But still more potent is the fact that a large number of pupils, after finishing high school, desire to enter college but may be prevented because the college will not accept the work done in the high school. Whether the college entrance requirements are just or not is a much mooted question, but that need not enter into this discussion. If the high schools approach a uniformity in curriculum, colleges will be forced to adjust their entrance requirements to the demands of the high school.

A very important movement in the history of the high school was made by the National Education Association in 1892 when it appointed what is known as the "Committee of Ten" for the purpose of encouraging more uniformity in college entrance requirements. The report of this committee bears directly upon the high school course of study and is doubtless responsible for very much of the discussion and revision of the high school curriculum during the last decade.

From Vermont (Vt. School Report 1906—page 50) we are informed that a committee from the State Teachers' Association and the Schoolmasters' Club proposes a course of study for the state "to secure greater uniformity and to direct the work of the high schools to practical as well as cultural ends." The report of this committee urges that more attention be paid to "practical education in the high schools; that heretofore too much stress has been put upon the so-called cultural or classical course."

The code of the state of Iowa (Iowa Biennial Report 1906—page 163) provides that the "board of directors shall have power to determine what branches shall be taught in the high school, but the course of study shall be subject to the approval by the superintendent of public instruction." This indicates that it was the intention of the state legislature that there should be some uniformity in the course of study. In practice, however, Iowa has not yet secured much unity in her high school curricula.

The Wisconsin school law (Manual of Free High Schools of Wis.

1907—page 8) provides that “the state superintendent shall prepare a course of study suitable to be pursued in the free high schools. All courses adopted by school boards must be approved by the state superintendent before the school is granted its share in the apportionment of state aid.”

The stringent laws in regard to uniformity in the state of Indiana have been quoted elsewhere, and I might continue to quote from the majority of states in the union showing the general effort to secure more uniformity in secondary education. However, opposed to this, I call attention to a most worthy article by Edward L. Thorndyke of the Teachers' College, Columbia University, (*Educational Review*, March, 1907—page 245), who maintains that there is such diversity of educational needs in different communities that “there is no typical high school in any useful sense of the word.”

REQUIRED SUBJECTS AND THE ELECTIVE SYSTEM.

Possibly out of this trend toward uniformity have developed two very characteristic features of the modern high school—required subjects and the elective system, which are so closely connected that they should be treated together.

Since the early days of the academies there has been a tendency to offer parallel courses of instruction, giving the pupil a certain amount of election. But at present the demand seems to be growing for the student to have a wide range of choice, not alone in courses, but in particular subjects. However, there is a pretty general agreement that certain subjects should be required of all students. The feeling that the high school should not be a mere preparatory school for the college is gaining ground. The students of the high school have reached the age when their educational needs are diverse. Then, what the state is demanding is an educational system with such unity and yet such flexibility that it can reach and develop these diverse talents.

If we note carefully the courses of study of a large number of schools, the tendency is plainly evident for certain subjects to be required of all students, no matter what course is being elected. The following table will illustrate:

	English.	History.	Mathematics.	Science.	Physical Training.
Indianapolis	' 3	' 1	' 2	' 2	' ..
Grand Rapids	4	1	3	1	..
Boston	2 3-5	' 1	1	1	1 2-3
Fall River	4	1	1	..	..
Burlington, Vt.	3	..	3	1	..
Canton, O.	3	1	3	2	..
Cedar Rapids	3	2	2½	2	..
Denver	3	1	2	1	1
Oakland, Cal.	2	1	2	1	1
Fresno	2	2	..	..	..
Jersey City	4	1	3	2	4
Spokane	4	1	2	1	..

Figures refer to year-units required of “all” students.

This table does not represent an exhaustive list at all, but will serve as a witness to present conditions. English is the most uniformly required subject, and we undoubtedly agree that no student can call himself educated in any course without a fair knowledge of English. History, mathematics and science come in as close seconds to English. My personal judgment based upon the courses examined is that there is a strong tendency to make at least 3 year-units of English, 1 of history, 1 of mathematics and 1 of science required of all students. Usually about 8 year-units are required. Following this about 4 year-units are to be elected by course or group, as science group, or mathematics group, and the four remaining units to be elected by subject.

There are some who object strenuously to the elective system, urging that high school pupils are not mature enough to exercise sane judgment in selecting courses or subjects; that the elective system makes possible the selection of "snap" or easy course, and that some of the fundamental subjects are shunned by many pupils because they are hard; and that the idea of the pupil, parent, and teacher deciding the course is not practical. On the other hand these arguments are reversed and it is added that no two pupils are alike in aptitude, ability, and inclination, and that the elective system gives opportunity for the developing of these diverse talents.

In the *School Review* (April, 1908—page 265) we find an editorial which criticizes severely the elective system, declaring that it "is defensible only as a military measure;" that along with the election has been developed the units system which is of "extremely doubtful value," as it forces a curriculum "so as to break up continuity which is absolutely fundamental for the educational development of the student." The writer's last statement is, "Our present secondary education is a chaos."

We believe that this view is extreme. The majority of opinion and the majority of action undoubtedly favor the elective system, although it is to be limited and guarded, as suggested before, by the required subjects.

For an excellent and logical discussion of the elective system, I refer the reader to an article in the *School Review*—Feb., 1905, page 150—by William T. Foster, Bowdoin College.

PHYSICAL TRAINING.

One subject which is commanding a place in many high schools on the required list is physical training. We are getting close to the view of Herbert Spencer, whose primary educational requirement was "the development of physically sound citizens."

In Jersey City "physical training is required of all students through the entire high school course." In Baltimore it "forms a part of the regular work each year." In Boston "no pupil, without good reason, is allowed to omit the physical training during the first three years of the high school work." There are some requirements in physical training in the schools of Oakland, Cal., Salt Lake City, Cleveland, O.,

Peoria, Ill., and many others—in all about 31 per cent. of the high schools examined require or offer physical training in their courses.

In the report of the Committee on Educational Progress of the Harvard Teachers' Association (*School Review*, May, 1908—page 296) we find:

"One phase of our broader view of education is an increased emphasis upon the needs and demands of the body. Legislative enactments, school regulations * * the establishment of gymnasiums, play grounds, roof gardens, and medical inspection, * * all indicate the double trend toward the combined training of physical and mental power."

The old Greeks emphasized physical education; the middle ages forgot its power, but modern education is getting back to recognize the close connection of a sound mind and a sound body. In the high school, physical training has been absorbed by "athletics"—a movement which needs, and which doubtless is coming to better regulation. Present athletics has a tendency to develop the few from a school who are skillful already in handling the body—the few who are really least in need of physical training. An experiment in Indianapolis consists in prohibiting interschool contests and confining the work to various events and games carried on by teams and members from the same school. There is a growing tendency in all school athletics to reduce the number of interschool contests. The movement is in the interest of more physical exercise and a more general participation in athletics at the expense of team and team contests.

To round up shortly the views that are held by many educators I shall quote from an enthusiastic article by Dr. Dudley A. Sargent, Harvard, who, writing on "Physical Training as a Compulsory Subject" (*School Review*, Jan., 1908—page 42), says:

"Our organic functions are molding our bodies and determining our constitutions and our temperaments and working on our wills and our characters. I do not know of any better method of fulfilling the very broad obligations of our educational institutions than by making physical as well as mental training a part of the regular curriculum (not in high school alone, but in every school).

"Under the head of physical training, I should include all forms of physical activity, music, vocal and instrumental, drawing, painting and modeling, all forms of manual training, dancing, skating, swimming, rowing, bicycling, military drill, calisthenics, games, plays and the various forms of athletic sports. With such a variety of exercises we would expect to train the body so as to make it the ready servant of the intellect and will, and enable it to do with ease and pleasure all the work that as a mechanism it is capable of, such as increased powers of attention, will, concentration, accuracy, alertness, quickness of perception, perseverance, reason, judgment, forbearance, patience, obedience, self-control, loyalty to leaders, self-denial, submergence of self, grace, poise, suppleness, courage, strength and en-

durance. And greater progress would be realized in the attainment of intellectual results at the same time."

NORMAL TRAINING OR TEACHERS' COURSE.

A course which demands some attention here is the Normal training course which is being given in a number of high schools. This course may seem to be out of place in the high schools, but I give this discussion because our purpose is to notice what the high schools are really teaching and what the people are demanding of them.

In the law for the state of Wisconsin (Manual of Free High Schools of Wis., 1907—page 8) we find the following:

"Each free high school shall offer at least twelve weeks of instruction each year in the theory and art of teaching, in the organization, management and course of study of ungraded schools; and in the duties of citizens in the organization and administration of local school systems. Such a course of instruction shall be open to all students of the school."

I quote further from the Nebraska Biennial Report, 1906—page 163:

"Let the high school course of study fit pupils for the work they must do upon graduation from the high school. By an investigation of sixty strong high schools of Nebraska we find that during the past three years 600 of the graduates went immediately to college, 800 into business, as farming, clerking, etc., and 900 into teaching—all in spite of the fact that these schools have been straining themselves almost to the breaking point for credit at college or university.

"Let us fit for college and for business and let us also train the still greater number of young men and women, who will teach school immediately upon graduation, in the art and science of school management. We do not propose to lengthen the course, but to eliminate useless subjects. The chief obstacle is the study of Latin. In many of the schools Latin engrosses one-fourth of the recitation periods and 40 per cent. of the time is spent in study. The place of Latin in our schools is purely traditional."

The statutes of Vermont provide a teacher's certificate for a graduate from a four-year high school who has had at least thirty weeks of daily study and recitation in the principles and methods of education.

The Kansas law provides for a four-year normal course in every county high school in the state. "The higher qualifications of teachers and the belief that other educational institutions of the state are unable to accommodate all who must have training in this emergency, naturally led to the introduction of this work in the high school."

College presidents are almost uniform in their outspoken opposition to this movement. Dr. G. Stanley Hall—"A priori as an abstract proposition the idea impresses me favorably."

Edmund J. James, Pres. of Ill. U.—"I regard it as a very temporary expedient."

Pres. Schureman of Cornell.—“Instruction in mere methods of teaching has no place in the high school.”

Pres. Jordan of Stanford.—“At best it is only a makeshift. It is better than no training at all.”

Pres. Eliot of Harvard.—“Strictly normal work should not be included in the secondary schools.”

With only six states in the union attempting this work and 32 out of 39 national educators unfavorable to the movement, the general trend of opinion is indicated. However, the state superintendent of Nebraska concludes thus:

“There is no other avenue for the training of rural school teachers in Nebraska than the high schools. The colleges and universities and advanced courses of our normal schools supply superintendents, principals, high school and grammar grade instructors; the elementary normal courses supply the grade work in town and city schools. It follows that we must look to our high schools to train those who are to teach the rural schools. It is a condition and not a theory that confronts us.”

LATIN AND GREEK.

The value of classical subjects, as Latin and Greek, has been bitterly attacked by many educators and has been criticised much by patrons of the high school. The movement for industrial education has almost submerged the classical subjects in many places. Greek has practically gone from the high school curriculum. Very few schools offer it. Latin, however, still holds a prominent place and is taught or offered in a large majority of high schools.

At first the high school was organized for those who were not fitting for college, but gradually it put into its curriculum those subjects which were required for college entrance. For a long time these entrance requirements have been set wholly by the college largely independent of the nature and needs of the high school. Of course this had a tendency to lift the standard of the high school to a high and uniform plane, but it also made it a machine grinding out students to fit a pattern and killing the spirit of independent investigation.

For years the high school has filled, tentatively, the gap between elementary and higher education, but with an increasing independence in its curriculum from the college entrance requirements. Now the feeling is strong that colleges should accept that student who has done four years of efficient work in whatever subjects the high school offers. The idea is growing that mental power and efficiency is gained not so much from *what* subjects the pupil studies as from *how* he studies. Consequently many colleges are dropping their requirements in Greek and Latin and this, in its turn, has its effect on the high school.

Agnes E. Stewart in the *School Review* (April, 1907—page 284) says:

“Greek is undoubtedly going out of our high school and college courses. Causes: (1) The growing popularity of scientific courses,

(2) colleges and universities have dropped Greek as a requirement for the A.B. degree, hence out of the high school, (3) commercial courses have a tendency to be 'easy' and election makes it possible for the student to select 'snap' courses, (4) poor and mediæval methods of instructors in teaching Greek, (5) regulations in certain city high schools that no class shall be started with less than twenty pupils in any year.

"In Michigan within three years after the law dropping Greek as a requirement for the A.B. degree only 50 per cent. as many students as before presented Greek for college entrance. Minnesota has only four public high schools teaching Greek. Illinois has only a few.

"I feel that the pendulum has swung away from the classical education only for a while and that already it has begun to swing back. When men shall feel that life consists not merely in the abundance of goods possessed, but also in the ability to understand and appreciate the greatest products of art, architecture and literature, then Greek will again take its place in the curriculum of the high schools and colleges.

In the *School Review*, (Nov., 1905—page 689) is an article urging that something need be done to encourage the study of Latin and Greek in the schools. The writer states that "Greek left to battle for itself among the electives of the high school will not survive;" that there is some doubt as to whether "Latin will continue to hold its own" although statistics indicate that one-half of the high school students of this country are studying Latin.

In the *Education Review*, (Jan., 1907—page 59) Francis W. Kelsey, U. of Mich., gives a strong defense of Latin and Greek in American education as yielding "discipline and enrichment of mind; exercising the imagination; cultivating aesthetic appreciation; clarifying moral ideals; developing power of expression, and making life more refined and more open to the influences which make living worth while."

COMMERCIAL EDUCATION.

A large number of high school students go into business or commercial life. This fact brings us to consider the place of the commercial course in the high school.

Cheesman A. Herrick in the *School Review*, (Feb., 1906—page 123) maintains that the best education is "that which fits its recipient for the highest service and the greatest usefulness to himself and the members of his community; that our people must work, hence, let them have the preliminary education that will make them masters of work and not work the masters of them." His commercial course would be one fitting the student for a broad outlook into life by a study and knowledge of those subjects that will constitute the elements of his life associations. We need to apply instruction more to fit the needs of the actual life about us.

He affirms that commercial education is education for social needs and that it furnishes as good a mental gymnasium for discipline and

culture as does the classical education, and that we are getting away from the idea that the best mental training must come from the study of subjects which we do not use in practical life.

In the Biennial School Report of Wisconsin, 1906—page 99, we read: "Commercial studies such as bookkeeping, stenography, type-writing, and commercial law are not being given the attention which their importance in business as well as their possibilities for certain kinds of training demand. This is not due to a lack of demand by the patrons, but to the difficulty in the way of their introduction."

When commercial subjects are offered they are placed usually late in the curriculum, the idea being that the student should have a broad general education as a foundation. But the numerous business colleges in almost every section of the county, whose sole purpose is to prepare the student quickly to take up some certain business life makes it difficult to determine what relation the commercial course should have to the high school curriculum.

The agitation is rather general for more commercial work in our high schools, and in many schools the course is put in and the results are scarcely satisfactory. Business men often complain at the work done by the high school commercial student, and the cause is evident. The training has been poorly done. Patrons must remember that well qualified teachers are scarce and that they are able to command large salaries in business at large. Our present condition is apt to continue until communities are willing to pay such teachers what they can earn elsewhere.

INDUSTRIAL EDUCATION.

One movement which, more than any other, characterizes this age is industrial education. Our educational papers are full of it and it is being experimented with and established in hundreds of high schools. In this discussion we must keep in mind that this movement does not apply to the high school any more than it does to the elementary school and perhaps even the higher education. Here I shall attempt to hold the discussion as nearly as possible to the high school.

By industrial education we refer to the so-called manual arts such as agriculture, manual training, domestic science and mechanic arts. So many people in discussing these subjects seem to think of their value merely from the standpoint of skill in the manipulative process of the hands and fail to recognize that which is of much greater importance—the moral and mental training involved in securing this end. I have selected the following by Fassett A. Cotton, Supt. of Indiana schools, as a good definition:

"Industrial education has for its purpose the acquiring of a body of knowledge of greater or less extent relating to industrial conditions, processes, and organization, and to the administration of affairs incident to the environment of the individual being educated, involving the gaining of some skill in the use of such knowledge, and the se-

curing of mental, aesthetic, and ethical training through the acquisition and use of the knowledge indicated."

No educator of the present day questions for a moment the close relation between the training of mind and body. This is the age when experts are studying how best to unite this mind and body development in order to produce the highest educational efficiency. It is an age of the practical. But what do we mean by the practical? The fact that the larger percentage of our boys and girls, as men and women, will be compelled to earn their living by actual work with their hands warrants the conclusion that any training that tends to develop skill is of practical value. This is the principle that is fusing its way into our public school system. The training of motor activities must have its place in the educational process and such training should carry with it habits of industry, respect for work, and a desire to do work.

Educational processes are being developed to meet the requirements of a civilization based on production, manufacture, and distribution. Out of the thirty-two millions of bread winners in this country some thirty millions must work with their hands. Evidently industrial as well as academic education deserves a place in our public schools which reach for a short time, at least, nearly all of this population.

In the Vermont School Report, (1906, pp. 50-61) we find the following statements: "Statistics show that 23 per cent. of our students who enter high school enter college. Shall the high school, then, direct its work more for the 23 per cent. who enter college or the 77 per cent. who do not? In the future the high school will fit more definitely for life instead of for higher institutions and thereby fulfill its real mission as the university of the people. It is almost criminal to send out young men and women into the world with so-called knowledge and without knowledge of its application. We want more of the practical and less of the theoretical, and the kind of industrial education must depend somewhat upon the community."

From the report of the Commission on Industrial and Technical Education, submitted to the senate and house of representatives of Massachusetts, we get these statements:

"With the development of modern times the old apprentice system has gone, but the schools have tenaciously held to the old curriculum with the result that our education tends to isolation and one-sidedness. There is a strong tendency toward a one-sided sense of value, a one-sided view of life and a wrong conception of and attitude toward labor. Not sharing in productive labor, nor being in touch with it, the youth have no standards by which to measure time or possessions or pleasures in terms of cost. We believe that grave social problems cluster around this point of industrial education.

"Pupils who complete the high school course at sixteen or eighteen years of age are almost wholly lacking in manual skill and what we call industrial intelligence. For the training for efficiency in productive employments the added years that they spend in school are to

a considerable extent lost years. The employment that they enter after leaving school is determined by chance. The state needs wider diffusion of industrial intelligence and this can only be acquired in connection with the general system of education into which it should enter as an integral part from the beginning."

This problem will probably be solved by trades schools if some better way is not found, but the prevalent sentiment seems to be that it should be solved principally in the public schools; that the trades schools have their place, but that they tend to develop a class system broadening the gulf between the so-called laboring classes and the aristocratic or cultured classes. If this be true it strikes a blow at the foundation principles of our nation—one people, freedom and equal rights. In the industrial school with rich and poor together, does not each gain more in his attitude toward life, work, culture, and ability to do things than if the two classes were separate? Each understands better the problems of the other and society is more closely united by the bonds of sympathy.

It is not the object of industrial education to teach trades but, skill in the use of hand and instrument and mind—a power of initiative in thought and action that will enable the pupil to utilize in the best manner possible the common experience and opportunities of life. As one man puts it, "It is not our purpose to make carpenters or cooks, but men and women. Learning how to do good carpenter work or to cook well may be the best way of learning how to be men and women."

Just in this connection I shall mention the Davis bill (Congressional Rec.-House, V. 41, part 5, 59th Congress 2nd session, March 2, 1907—p. 4499). The purpose of this bill is the establishing of agricultural high schools in the various states, whose support shall come partly from the government.

My individual opinion is that we should go cautiously; that such schools may tend to develop class spirit in education and that the present classical high school may be pushed aside to become a private school for the upper or cultured classes.

Extensive and specially equipped buildings have been erected in many of our cities for manual training and domestic science work in the secondary schools. Fort Wayne, Indiana, is a good example. There they offer a four-year course including wood-working, free-hand drawing, forge work, mechanical drawing, foundry practice, pattern making and machine shop practice. For the girls, sewing and cooking departments are maintained. "That vocation in which all other vocations have root—namely, the care of the home, has been overlooked in the modern system of education."

A regrettable tendency in small towns is to put in courses of study far beyond the ability of the community to support adequately. The consequence is that the one or two teachers employed are overburdened, the work is often poorly done and educational discouragement and lassitude follow. An important fact for promoters of a movement to

remember is that an educational reform cannot always be established in the schools as soon as it has been proved by the advanced leaders to be correct. Industrial education will not prove the panacea for all the ills of the school room. Channing gives good advice in his symphony when he says, "Await occasions—hurry never." We may be able by an educative process to hasten occasions, but an educational reform, no matter how good, should never be precipitated into a community until the people of that community are educated to such a place that we have every reason to believe that they will give adequate support to the movement. In some places good movements have been retarded for years because they were introduced before the people were ready to receive them, and failed to come up to expectations. The second introduction is harder than the first. Manual training, domestic science, and agriculture will advance to smaller high schools rather slowly.

We should keep in mind that industrial training takes only a fraction of the time from the standard course of study. It does not mean that the classical and cultural sides of education are neglected or ignored. If by industrial education a large number of boys and girls can be induced to pursue a high school course, who would otherwise drop out of school at the completion of the eighth grade, it certainly has proved its right to a fraction of the time. The general culture course cannot help much those pupils who cannot be interested enough to remain in school. "Since the introduction of industrial work," says the superintendent of the high school at Bluffton, Indiana, "the enrollment in the high school has more than doubled—the school enumeration remaining practically constant—and the increased enrollment has been largely among the boys."

Much more could be said on the subject of industrial education but I shall simply refer the reader to the bibliography given at the end of this work.

THE SIX-YEAR HIGH SCHOOL COURSE.

Our high school curriculum is in an unstable condition at present with reference to the allotment of time to elementary, high school, and higher education. The principal cause leading to this disturbance seems to be the fact that a large number of pupils leave school upon completion of the eighth grade. It is maintained that the abrupt change from the eighth grade to a new building, with new teachers, new subjects and new methods of teaching, at an age when new things are feared by the pupil is largely responsible for this falling off in the ranks. I quote from G. H. Locke (*School Review*, Vol. 13, page 191): "We know, for instance, of some high schools where, in the first year, the subjects of study are algebra, physiology (with special reference to the effects of alcohol and narcotics upon the human system), rhetoric, and Latin or German. These are taught from a technical point of view, and the result of a year's work of this kind upon the normal boy is that he wants to go anywhere but to school."

Different remedies are proposed but the one most advocated seems to be an early introduction of secondary education,—at the beginning of the seventh year, making six years of elementary and six years of secondary education.

The School Review, (March, 1907—page 184) reports from Pres. Eliot:

"Improvement in education up to the age of eighteen years needs, (1) the extension downward of departmental teaching, (2) the earlier introduction of many subjects now reserved to the high school."

Strong arguments are given for departmental teaching, or possibly semi-departmental teaching to be given in the seventh and eighth grades, each teacher having two subjects instead of one.

Many interesting experiments have been carried on, among them a noteworthy one by Homer H. Seerley, president of the Iowa state normal school. I quote from his extended report which may be found in the biennial report of Iowa, 1905—page 170: "Experience indicates that the so-called common branches—advanced arithmetic, technical grammar, the type of geography commonly selected, the physiology and U. S. history usually assumed appropriate in the grades are, all of them, beyond the capabilities of children and naturally belong well up in the secondary curriculum where there is the judgment, imagination and reasoning of the adult mind. At this period a knowledge of these subjects can be acquired in twelve weeks, which is superior to that requiring two years in the seventh and eighth grades.

"The subjects suitable for substitution in these grades are, (1) stories of history, omitting systematic arrangement deemed essential by chronology or logic; (2) selections from American and English literature especially adapted to the pupils taught; (3) elements of nature study found in elementary physiology, natural history, experimental physics and other sciences; (4) suitable work in algebra and inventional geometry; (5) German and Latin (subjects whose introduction is easier at this age than later). In addition, time may be found easily for vocal and instrumental music, free-hand and mechanical drawing, manual training, domestic science, physical training and extensive courses of reading in the best books of literature.

"The time of attendance in the public school is reduced at least one year. In equipment these students are found to be, in all respects, equivalent, and in some respects superior, to those who have graduated from the standard curriculum; and it is maintained that a better interest is secured on the part of the pupils throughout the course because of the more logical sequence of studies."

This movement, I think, bids fair to effect some important changes in the high school curriculum within the next decade.

SOCIAL AND MORAL EDUCATION.

Two subjects, which constitute the very foundation of all true education, will be found printed in no high school course of study. I refer to social and moral education, sometimes termed heart culture.

The two are naturally inseparable and are found, to a greater or less extent, in every high school, for they constitute what may be termed the atmosphere of the school. Social relationships, discipline and every subject in the curriculum has heart culture in it. Let each subject and each relationship be taught by appealing to interests that lead toward the highest conception of life.

William D. Parkinson (*School Review*, Nov., 1905, page 661) states that "studies themselves are secondary. They become mere occupations, industries, variations of that current of experience out of which life is wrought and its real lessons learned."

Adolescence, the time allotted to secondary education, is the period most prolific in the definite formation of character. Then, more than at any other period of education, is the time when life's course is becoming fixed for the student. The high school teacher too often forgets this and throws his whole efforts toward the attainment of scholastic ends (which are well and good), losing sight of his greater duty toward the pupil—that of developing a sense of personal honor and of the realization of truer social relationships.

Moral or immoral influences go into the school room in the person of every teacher. How often do teachers of literature or history impress upon their pupils figures of speech or facts of history when there is opportunity to make souls thrill at the emotions impelling characters to certain actions, or to arouse admiration of the spirit of honesty, devotion, self-sacrifice or sympathy shown in some historical character?

Aristotle speaks of man as the greatest social animal and we might refer to the high school age as the one most peculiarly susceptible to the spirit of social organizations—athletic teams, literary, debating, musical clubs, and what not—all of which should be under the careful, soulful supervision, conscious or unconscious, of a faculty member. Here are opportunities the greatest to teach the truths of that passage "No one of us liveth to himself."

We need more of conscious effort to develop, possibly I should say to train in the way they should go, the moral and social instincts of the youth of our high schools. These subjects can not be taught in the best manner from text books. They must come from the teacher who Carrol D. Wright declares is "first of all an interpreter of life."

Let me call attention just here to an article which I wish every high school teacher might read and study—"The High School's Cure of Souls," by Edward O. Sisson, University of Washington. (*Educational Review*, April, 1908, page 359.)

The high schools of today are demanding more and more those teachers with a "burden of soul for humanity"—teachers who, through the instruments of the curriculum, can develop men and women, citizens who have the spirit called for in the lines:

"God give us men! A time like this demands

Strong minds, great hearts, true faith, and ready hands;

Men whom the lust of office does not kill;

Men whom the spoils of office cannot buy;
Men who possess opinions and a will;
Men who have honor,—men who will not lie;
Men who can stand before a demagogue,
And scorn his treacherous flatteries without winking!
Tall men, sun-crowned who live above the fog
In public duty and in private thinking.”

—J. G. Holland.

SUMMARY.

First, I have attempted to give a history of the high school movement in order that its position in educational work might be understood better. Second, I have given a study of the high school curricula as they are given or offered in various high schools. Third, I have given findings about some particular subjects of the curriculum upon which there is agitation and difference of opinion. Fourth, I have given the opinions of authorities, more or less strong, upon the course in general and upon various subjects, and changes of the curriculum.

By tabulation we find that few courses are being offered with a tendency to have a general course with about eight units required of all students and the rest, elective by group or subject. A unit is considered as work for five forty-minute periods per week for one school year.

We find that physical training is being required in many schools and is growing more popular; that teachers' training courses are offered in the high schools of five or six states, but educators in general do not favor them; that Greek is going out of the high school course, and Latin is about on a standstill; that commercial education is receiving considerable attention but is very unsettled yet; that industrial education is advancing very rapidly; that there is strong argument for including two years of the elementary period in the secondary, and making a change in the sequence of studies; and that high schools are demanding that more attention be given to social and moral education.

AFTERWORD.

This subject is broad; there is such difference of opinion about almost every phase of it, that it is hard for one to make definite, positive statements. In this thesis I have tried to indicate, as nearly as my study permits, what conditions are. Some of the conclusions may not be accurate.

The reader will not be benefitted much by the discussion, but I have been benefitted by the study. However, I feel that I have just a good foundation—have just reached the place where I can begin a real study of the theme.

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The principal part of the information for this thesis has been gained from a study of state school reports and from catalogs of in-

dividual high schools. I have given reference to these as they were used and shall not repeat those references here.

In educational journals and reports I have done extensive reading and shall give here those articles which bear most directly upon the subject.

I shall attempt to place the articles under the subject of which they treat as nearly as possible, but many of them refer to the theme in general.

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*N. E. A. stands for National Educational Association; S. R., for School Review; and E. R., for Educational Review.

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Thesis approved:

H. C. SAMPSON,
A. A. CLEVELAND,
CHAS. TIMBLIN,

Committee.

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